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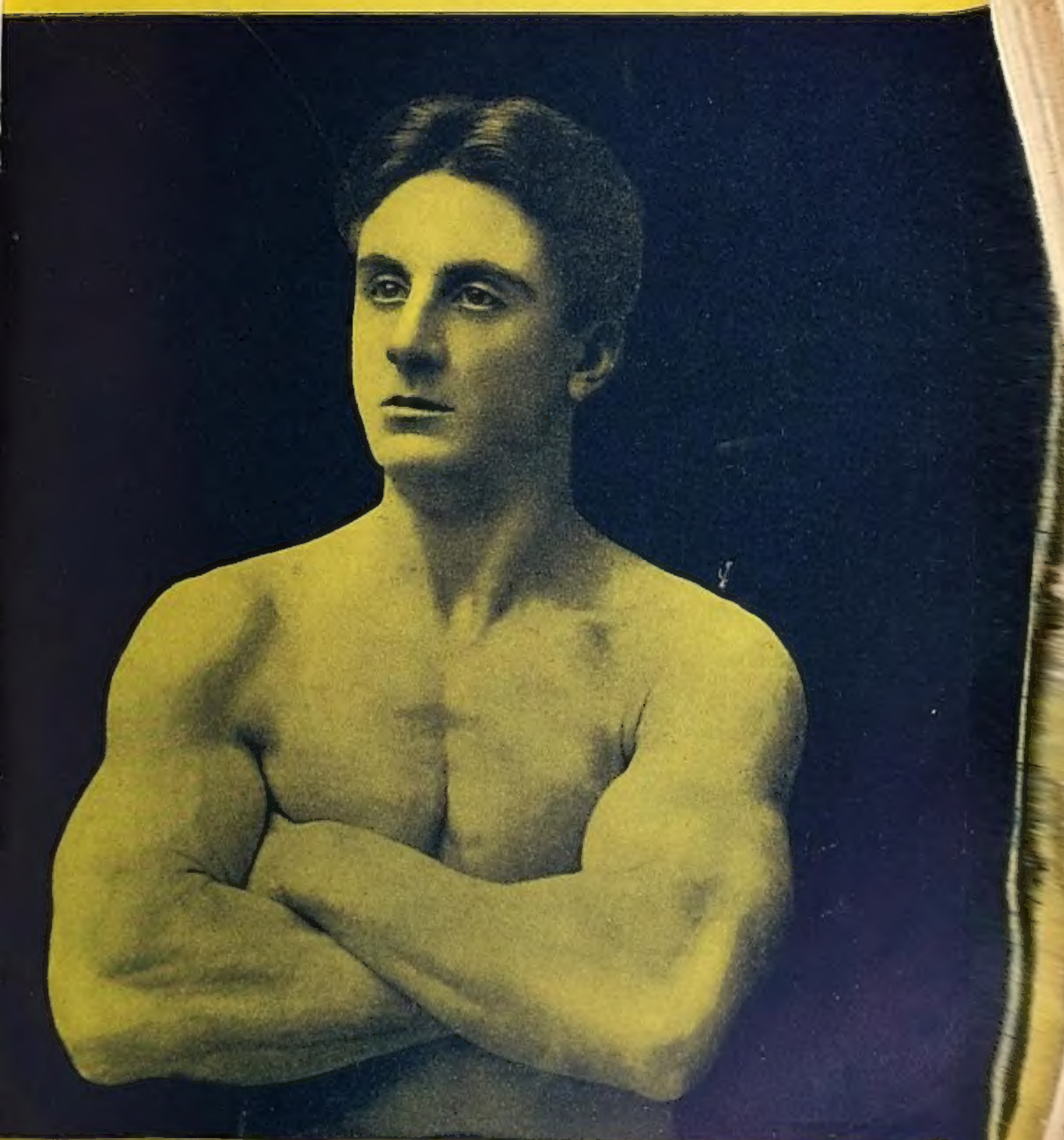

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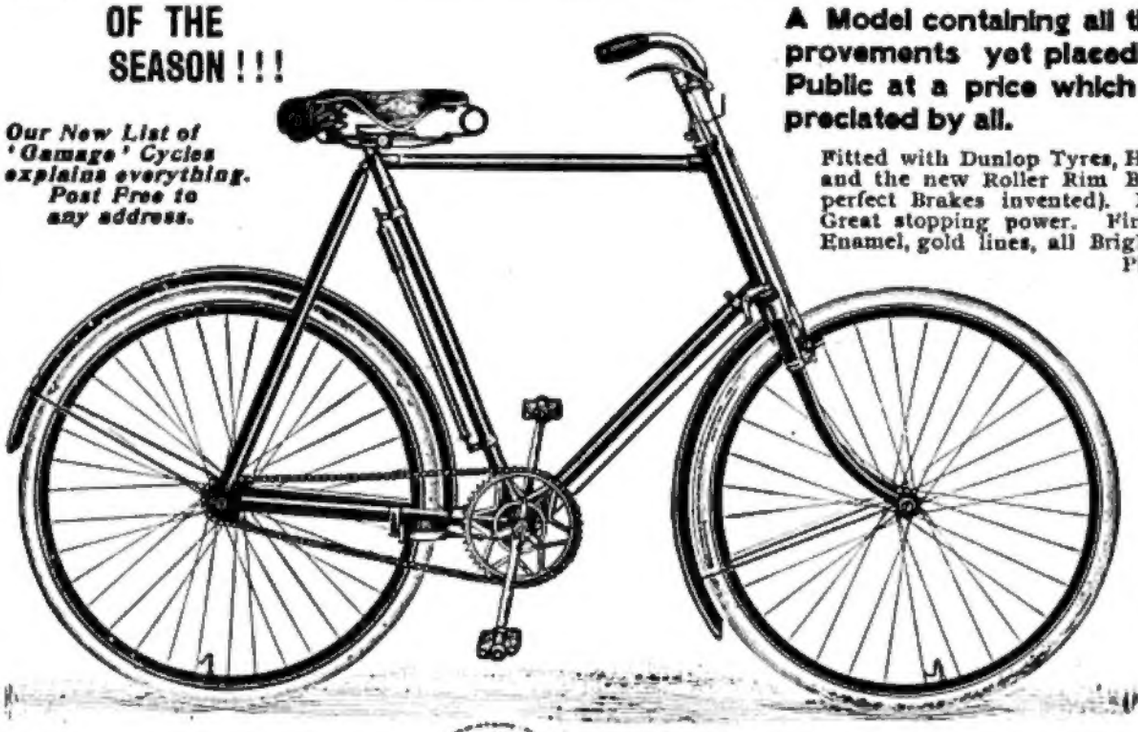

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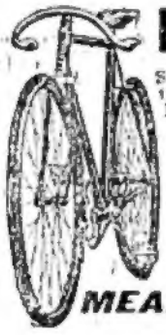

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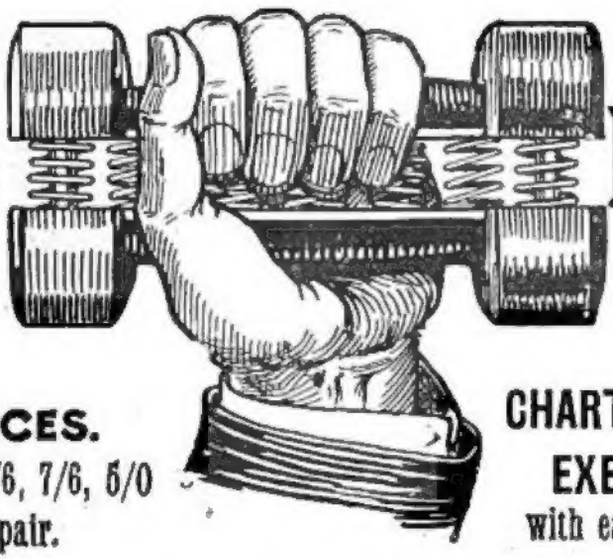

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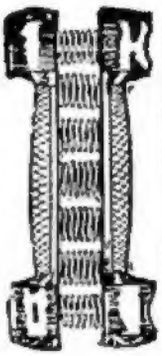

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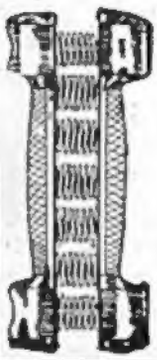

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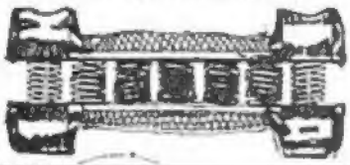

Letting the Body Sag.

Did you ever know a perfectly healthy person who did not stand erect? The bent-over, stoop-shouldered, head-forward, flat-chested people are the ailing, nervous, consumptive, or rheumatic kind, are they not? Think over your acquaintances and see. Look at the position which children assume as they are going to school. You may safely foretell for the crouched-over, bent-forward little ones a future of ill-health and premature decay.

Many a child needs a little instruction in these matters, and if it could be given early, and attention paid to the nasal passage, so as to allow free breathing without effort, good health might follow improved carriage, and chances of suffering and disease be saved. There is no doubt but that the incorrect position of the body leads to ill-health. If the front of the body be allowed to sag or droop forward and downward, and the head is slightly bent, there is an entirely changed position of all the many long bones forming the trunk, as well as those of the pelvis, which forms its base.

The ribs are inclined sharply downward, the breast bone and the collar bones are sunken, and the capacity of the upper part of the trunk is greatly diminished.

If, on the other hand, the body is swayed forward until the weight is resting on the balls of the feet, the head thrown back and the chest up and forward, there is at once marked increase in the size and capacity of the trunk. But the trunk carries the vital organs. If they are crowded for room, if they are squeezed close together, it is no wonder that disease will follow.

Value of Fatty Foods.

A great many people discard all fat from their diet. If there is the least bit of fat with the meat, they are very careful to trim off the fat and eat only the lean portion. They seem to have not only a distaste for the fatty portion of meat, but never stop to think that perhaps this part of the meat contains just the elements required by the system. Of course, the red meat contains more proteids than the fat, but, at the same time, the fat is very nutritious, and serves to increase the resistance against cold, and build up the system and give it power to resist or overcome certain diseases.

Anyone inclined to scrofula would do well to eat some fat, so also would the tuberculous patient. An increase in the amount of fatty foods would go a long way and do a great deal to increase the strength and vitality and, perhaps, prevent the further development of scrofula or tuberculosis.

Of course, even fatty foods should be taken in reasonable quantities, and it is well to take a variety of fatty foods, and not confine one's self to a single kind of fat. Almost all the fats some people eat are obtained from butter. Butter is good, but the other fatty foods should also be used. The fat part of beef, mutton, pork, cream, olive oil, etc., furnish very good fatty elements.

Instead of letting the butcher trim off all the fat from the meat, you had better leave it on and take it home, as it contains some of the most nutritious and nourishing parts of the meat.

When eating meat, do not confine yourself simply to the lean portion and push aside the fat, but remember that the fat nourishes and builds up the tissues of the body.

Every one should combine with their other food a reasonable amount of fatty food, in the form of fat meat, cream, butter, olive oil, etc. It seems to lubricate the system and ward off scrofula, tuberculosis, and other disease.

Housework and Health.

A woman cannot work at dressmaking, tailoring, or any other sedentary employment, without enfeebling her constitution, impairing her eyesight, and bringing on a complication of complaints; but she can sweep, cook, wash, and do the duties of a well-ordered house, with modern arrangements, and grow healthier every year. The times when all women were healthy were the times when all women did housework a part of every day.

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Contents.

NOTES FROM MY NOTE-BOOK. By The Editor ... 1
THE ACT OF BREATHING ... 3
ANCIENT AND MODERN PHYSICAL CULTURE. By Archibald McLaren 4
EVERY MAN SHOULD BE KING OF HIS OWN BODILY KINGDOM. By Auretta Roys Aldrich... ... 7
ON BEING DONE GOOD. By Edward B. Lent ... 10
BOTH OVERWORK AND UNDERWORK DANGEROUS ... 14
HOW TO ESCAPE SEA-SICKNESS ... 15
HEALING POWER OF SUNLIGHT ... 16
THE OCCASIONS OF DISEASE. By Robert Walter, M.D. 18
PEOPLE WHO BREATHE POISON. By J. H. Kellogg, M.D. ... 20
CAN WOMEN EQUAL MEN AS ATHLETES? By E. Hjertberg ... 22
AN AMERICAN GOLFER'S IMPRESSIONS OF SCOTLAND AND SCOTCHMEN ... 24
NARCOTICS ARE DANGEROUS REMEDIES ... 25
IN THE ARENA OF SPORT ... 26
READERS' CLUB ... 27
HINTS FROM SANDOW AND ANSWERS TO CORRESPONDENTS ... 30
COLDS THE RESULT OF POOR VITALITY ... 31
OUR READERS' LIBRARY ... 32

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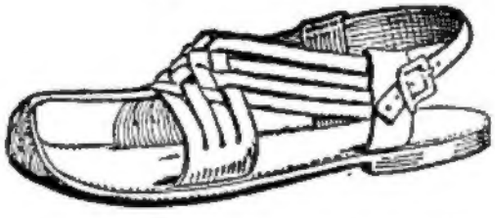

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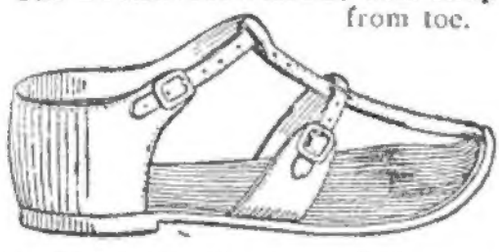

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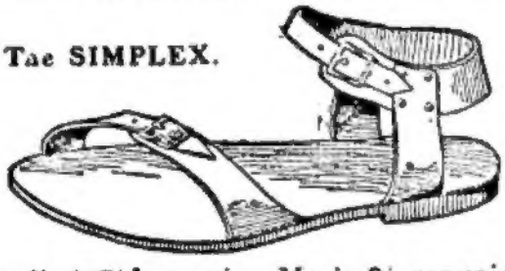

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SANDOW'S MAGAZINE

...OF...

PHYSICAL CULTURE.

Editor: EUGEN SANDOW.
Assistant Editor: FRANK PINK.

MOTTO:—*Mens Sana in Corpore Sano*—A SOUND MIND IN A SOUND BODY.

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EDITORIAL.—I am always pleased to receive Contributions, Literary and Pictorial, for consideration. Where payment is desired, the Contribution must bear note of amount required. Prompt consideration will be given and an early reply forwarded.

NOTES FROM MY NOTE-BOOK.

BY THE EDITOR.

In the last issue of the Magazine there appeared an article describing the sanitary and congenial conditions under which the workers of Mr. W. H. Lever, M.P., of Sunlight Soap fame, live, move, and have their being. And now I have received a letter from a shop assistant in a large West-end drapery establishment in which he describes most vividly the terrible conditions that attach to the living-in system. I have so frequently referred to this subject in these columns that I am glad to have such direct testimony to its evil effects as that given in my correspondent's letter.

o——o

My correspondent sends me a list of the rules that govern the establishment with which he is connected, and on perusing them I find they are even more drastic than I have imagined. It appears that the employés are only allowed fifteen minutes for breakfast, half-an-hour for dinner, and the array of "offences," liable to fines and wage-deductions is interminable. No time is allowed for recreation, and the food supplied is both poor in quality and limited in quantity. It is, indeed, a gratifying thing that a Parliamentary Committee is about to enquire further into the matter, and it will, it is to be hoped, completely put an end to this wholly undesirable and unhealthy system of living-in.

o——o

It is a pity that more employers of labour will not recognise the dignity of labour. This attitude, at once short-sighted and selfish, is as much a danger to the common-weal as that of the slothful and the criminal, and employers should be the first to set an example to those who work for them. The old days of "Each for himself and the devil take the hindmost" have gone, and the sooner it is realised that the general welfare is entirely dependent upon the individual

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welfare, the better for everyone. There come times in the affairs of all nations when mere commercial astuteness counts for less than physical and mental soundness, and at such times it is the nation that is best fitted to face the crisis that survives. A nation of individuals, each of whom lives unto himself, is a nation doomed.

o——o

I have referred recently to the awful prevalence of drinking among the women of the metropolis. Some attribute this to an excess of prosperity, others to the black shadows of adversity. For my own part, I think the real cause is to be found in the fluctuations that are constantly taking place between both these stations. The precarious existence of those who merely exist from day to day —who oscillate at intervals between unaccustomed luxury and extreme poverty— is anything but conducive to a high standard of morality. Still, there is no doubt that to a very great extent the prevalence of alcoholism among women in London is to be attributed to the squalid misery and unsanitary surroundings of the poor of the metropolis. It is, in this case at least, no easy matter to distinguish between cause and effect. Whether poverty is the cause of drunkenness or drunkenness is the cause of poverty is a problem that has not yet been solved.

o——o

There is no doubt, however, that drunkenness among women is terribly, painfully prevalent among the wives of the working-men of London, and that this state of affairs is largely responsible for the physical degeneration of the race. An Australian M.P., who has been recounting his experiences during a recent tour through England, says the most appalling sight he ever witnessed was the multitude of women in the public-house bars of London and the greater provincial cities. I know from the opinions of many foreign and American and Colonial visitors to London that the spectacle of bars crowded with women is a shocking sight, for such scenes are unknown elsewhere, except in the most vicious and degraded quarters. In America, in France, in Germany, in Australia, even in Ireland one cannot see the orgies that one may witness in a London public-house every Saturday night.

o——o

It is a fearful thing to contemplate that the children who are to be the citizens of the future should be left to the often well-meaning but misguided and ignorant methods of such mothers.

o——o

I have in course of preparation a grand summer number dealing mostly with matters out of doors. It will have a charming cover and the contents will interest every lover of the healthy, outdoor life. Tell all your friends about it, and try and get as many of them as possible to get a copy. I know by the hundreds of letters I receive that it was through a perusal of the magazine that its pages gave the first incentive to physical training, so if you have any friends whom you wish to do a good turn, just get them to begin reading the magazine.

Germs in Physic.

The Chicago meat scandal has raised the question as to the purity or otherwise of the preparations made from the various glands of animals, and used as remedial agents in medicine. Extracts of the thyroid gland, of various portions of the brain, of the supra-renal capsules, and so on, are used in various forms in medicine, and it is obvious that if these are taken from diseased animals they may themselves be the means of conveying disorders.

A *Tribune* representative has elicited a reassuring statement on this point from the manager of a firm of well-known manufacturing chemists. This gentleman said there was not the least cause for alarm on the part of the public.

The method employed for collecting and extracting the active principle of the glands was of such a character that there was no possibility for the germs of disease to have any existence at all.

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THE ACT OF BREATHING.

THE normal rate of respiration is sixteen to eighteen times a minute, or about one breath for every four heart beats. The rate of respiration differs greatly in different animals. The hippopotamus, for example, breathes but once a minute, while the sparrow breathes ninety times a minute, and the rat two hundred times in the same period. The ox, the dog, and the horse breathe at about the same rate as man.

The idea that women naturally breathe with the upper part of the chest, while men breathe abdominally, has very little, if any, foundation in fact. The writer took pains a number of years ago to make a careful study of this subject among the most primitive Indian tribes of the United States. He also made careful observations of Chinese women, and has since had opportunity for similar study of the breathing movements of Mexican, Egyptian, and Arab women, as well as those of other nationalities, whose clothing has never been such as to interfere with the normal breathing movements. In such persons, the type of breathing has been found to be in women precisely the same as in men, namely, an expansion of the whole chest. The movement is naturally less at the upper part than at the lower part, for the reason that the ribs which form the framework of this portion of the chest wall are shorter and more firmly held in position, while the lower ribs are supplied with long, flexible cartilages, which readily yield under the pulling action of the muscles of respiration.

The amount of air which passes out and in the lungs during respiration is about twenty-five cubic inches. This represents, however, but a small part of the actual capacity of the lungs. The average man is able to take into the lungs, after an ordinary inspiration, one hundred or more cubic inches, and to force out of the lungs, after an ordinary expiration, an equal amount. There is still left in the lungs, after as much air as possible has been forced out of them, about one hundred cubic inches, making the total lung capacity of the average man about three hundred and twenty-five cubic inches, or nearly one and a half gallons.

The act of breathing is a blood-pumping process as well as the means by which air is removed in and out of the chest. Each time the chest wall is elevated after the lungs have been emptied and the succeeding inspiratory movement begins, a suction force is exerted upon the large veins which enter the chest, especially those which come in through the abdominal cavity. At the same moment, the downward pressure of the diaphragm by which the liver, stomach, and other abdominal organs are compressed against the muscular walls of the abdomen serves to force the blood from below upward, emptying the venous blood of the abdominal cavity into the chest, thus helping it on towards the heart. The more tense and well developed the muscles of the abdominal wall, and the stronger the muscles of respiration, the stronger will be this upward movement of the blood. When the abdominal muscles are weakened by improper dress, tight lacing, or by the wearing of belts or bands, or by sedentary habits, especially sitting in a stooped position, the weakened muscles yield to the downward pressure of the diaphragm, thus neutralising to a large degree the beneficial influence of this action. This condition is unquestionably a cause of chronic disease of the liver and stomach, inactive bowels, and possibly lays the foundation of cirrhosis of the liver, spleen, and other grave disorders of the abdominal viscera.

The facts call our attention to the wonderfully intimate relations which exist between the functions of different parts of the body. Vigorous breathing not only benefits the lungs and purifies the blood, but aids digestion, promotes the absorption of food, and assists the portal blood through the second set of capillaries in which it is spread out in the liver.

ANCIENT & MODERN PHYSICAL CULTURE.

By ARCHIBALD MacLAREN,
Author of "A System of Physical Education."

OUR first record of physical training, that is to say, of any system adopted and practised with the single view of improving and cultivating the physical resources, is to be found in the competitive exercises of the early Greeks and Romans; and it has been said that we have lost as much by the discontinuance of the system of bodily exercise of these nations as we have gained by our knowledge of physiological science. This is one of the aphorisms which men are fond of repeating, but which will not stand criticism. No price can be set upon our knowledge of physiological science, no estimate can be formed of its value. The extent, the importance, and the value of the system of bodily exercise practised by the Greeks and Romans we can appraise exactly—can gauge with almost mathematical accuracy, because we know entirely of what it consisted and for what purpose it was organised and maintained. We can therefore tell, by a comparison of the want experienced with the thing produced to meet the want, if the object desired were accomplished; and we can do this chiefly, if not wholly, by the light of physiological science, which alone has revealed to us what exercise is, and what its suitable administration can accomplish in the human frame.

It is generally admitted that this system of bodily training—unguided, undirected as it was by a ray of science deserving of the name—accomplished the object desired. How did they who framed it, thus groping in the dark, grapple with and hold fast by the truth? By the observation of results. This was the lamp which guided them in the selection of the exercise which formed their system of bodily training. They observed that the strength of the body, or of any part of the body, was in relation to its muscular development, and that this development followed upon, and was in relation to, its activity or employment. They did not know that man's material frame was composed of innumerable atoms, and that each separate and individual atom had its birth, life, and death; and that the strength of the body as a whole, and of each part individually, was in relation to the youth or newness of its atoms. And they did not know that this strength was consequently attained by, and was retained in relation to, the frequency with which these atoms were changed, by shortening their life, by hastening their removal and their replacement by others; and that whenever this was done by natural activity, by suitable employment, there was ever an advance in size and power, until the ultimate attainable point of development was reached. They simply observed that the increased bulk, strength, and energy of the organ or limb was in relation to the amount of its employment, and they gave it employment accordingly.

They must have observed, however, that this did not apply in equal degree to all kinds of muscular employment, and that it applied most directly to those where the action was rapid and sustained. They did not know that this rapidity of muscular contraction and expansion was the chief agent in quickening the circulation of the blood, from which the whole body derived its nourishment; the tide on which was brought up all fresh material for incorporation into its tissues, and on which was borne away all that was effete and waste—brought up and borne away most rapidly in those parts which were being most rapidly employed—for they did not know that the blood was a moving current at all. They only observed that exercises consisting of rapid muscular movement were most

conducive to strength and activity; so, without exception, the exercises composing their system were of this description.

But they must have observed also, that there was a form of physical employment which did not give physical development, or yield its natural fruits of health and strength; and that was the slight, effortless occupations of many art-callings and crafts. They did not know that without *resistance* to be overcome there could be no full demand for volition, no full call, therefore, for material disintegration and renewal, with proportionate increase in bulk and power. They simply observed that development was in relation to the quality as well as to the quantity of exercise—that where energy was exacted in the practice, energy was the fruit of the practice; so for their system they selected exercises where energy was voluntarily called forth in the highest possible degree.

Other essential constituents of exercise owed their recognition to the same source—the observation of results. They observed that during certain kinds of physical exertion the act of breathing became greatly affected, that each inspiration was larger in volume, and that each followed each in quicker succession, than when the body was inactive. This they must have observed, although they may have viewed it but as a drawback to physical ability, a hindrance to be overcome, or in the same light in which our schoolboys now view it—as a condition of "bad wind" or "internal fat"; for they could not know that in every breath they breathed, a load of wasted material of the body was given up by the blood and its place supplied by the life-giving oxygen from the surrounding atmosphere; and that just in proportion to the rapidity and energy of muscular movement during the exercise was the rapidity and volume of the current of the blood rushing through the lungs; and that, therefore, for this current of blood to be aërated, proportionately large and proportionately rapid was the current of the air respired; and that, following the natural law of development being in relation to employment, the lungs themselves were strengthened by this increased activity. They, probably, simply observed that the power to sustain this accelerated process of respiration was obtained in proportion as the exercises which excited it were practised; so exercises which required the sustaining of accelerated breathing received an important position in their system.

They must have observed, further, that energetic physical exertion and quickened respiration caused the skin to be suffused with moisture, and that this gave instant relief from a discomforting sense of heat. They did not know that this augmented heat was in a great measure caused by the accelerated breathing—the fanning of the fire which is ever burning in the living frame; and they did not know that this moisture was water drawn from the blood and poured out over the skin's surface, in order that the discomforting heat might be with it eliminated. They did not know that the skin itself was a covering of marvellously woven network, presenting millions of interstices and apertures, and that each of these apertures was the open débouche or outlet of a duct or tube which, striking deep its convoluted roots among the underlying strata of blood-vessels, separated from the accelerated currents what might prove injurious to the health of the body, and poured it forth through these myriad mouths; but they observed that these skin-exudations proved a powerful aid to the acquisition of permanent health and strength, and notably so to the health, elasticity, purity, and beauty of the skin itself. So, without exception, every exercise in their system is of that kind which readily contributes to this result.

Finally, they must have observed, that just in proportion to the amount of clothing worn during exercise, were the processes of respiration, and the evaporation of this moisture from the skin, retarded. They did not know the structure or functions of either lungs or skin; still, they saw that they both acted together, were stimulated to activity by the same means, and by the same means were sustained in functional ability; and that during physical exertion hindrance to both was in proportion to the amount and weight of the garments worn; so they simply, while performing their exercises,

reduced their clothing to the minimum, and thence called their system of bodily training "Gymnastics."

Thus, then, by the observation of results were the ancients guided with sufficient accuracy in the comprehension of the chief features, and in the estimation of the relative value, of certain modes of bodily exercise; and thus they were enabled to choose, on assured grounds, those exercises which were most suitable for the system which they desired to organise. They desired a system specially applicable to individual culture, individual exertion, individual excellence, individual distinction; a system which should cultivate personal courage, presence of mind, and decision; a system possessing the utmost limit for individual effort, presenting the fullest opportunities for personal display and personal distinction. Therefore was the hand laid upon all exercises of high competitive effort—wrestling, boxing, throwing the discus, racing on foot, on horseback, and in chariot. The system was as simple, as practical, and as serviceable as the Greek shield or the Roman sword.

The system of bodily training of Greece and Rome had then but one aspect, one aim, one object. It was designed to practise the youths of the country in all exercises tending to qualify them for the exigencies of war, as war was then pursued, as campaigns were then made, as weapons were then borne, as battles were then fought. Other object, other aim, other aspect, had it none.

But, in those days, as in our own, there must have been men of unsound constitution and imperfect growth, from original weakness of organisation, or from illness, ignorance, neglect, accident, and other causes. What system of bodily training was framed for their behoof? None. Here the observation of results was unequal to the requirement. They could reach no higher—they aimed no higher—than the production of a series of athletic games, suitable to the young, the brave, the active, the strong, the swift, and the nobly born.

Our knowledge of physiological science is something more valuable than this. A system of bodily exercise which should give added strength to the strong, increased dexterity to the active, speed to the already fleet of foot, is not what is alone wanted now. It is not to give the benefit of our thoughts and observations and the fruit of our accumulating information to the already highly favoured, and to them only, that we aim. On the contrary, it is the crowning evidence of the Divine origin of all true knowledge, that in benefiting all within its influence, it benefits most bountifully those whose needs are the greatest.

In our days, as of old, the race is still to the swift and the battle is still to the strong, but the battle of life now is waged with the brain for weapon, and the race is the high pressure competitive efforts of memory and mind. These are the great and all-absorbing struggles of our times, a "struggle for life" as hard, and involving results and transformations as unerring and inevitable, as ever were traced in the origin of species.

(To be continued.)

Bad News for Vegetarians.

Professor Metchnikoff, in the second of the Harben Lectures, at King's College, during his recent visit to this country, expressed the view that oxyures and ascarides are frequently present in cases of appendicitis. These injured the mucous lining in the area of the appendix, and so laid bare points of entry for germs which caused appendicitis.

He based his opinions on the fact that the usual vermifuge treatment in appendix cases has largely decreased the number of fatal results.

Referring to precautionary measures, the professor said that washing vegetables in boiling water was not sufficient. They should be scalded, as they were frequently the carriers of ascarides, oxyures, and other pathogenic microbes.

Curing Old Age.

A well-known wrestler, Mr. Muldoon, who recently treated Mr. Choate, the ex-Ambassador to Great Britain, has undertaken to cure Senator Chauncey Depew, the well-known politician, who has been in very ill-health for several months.

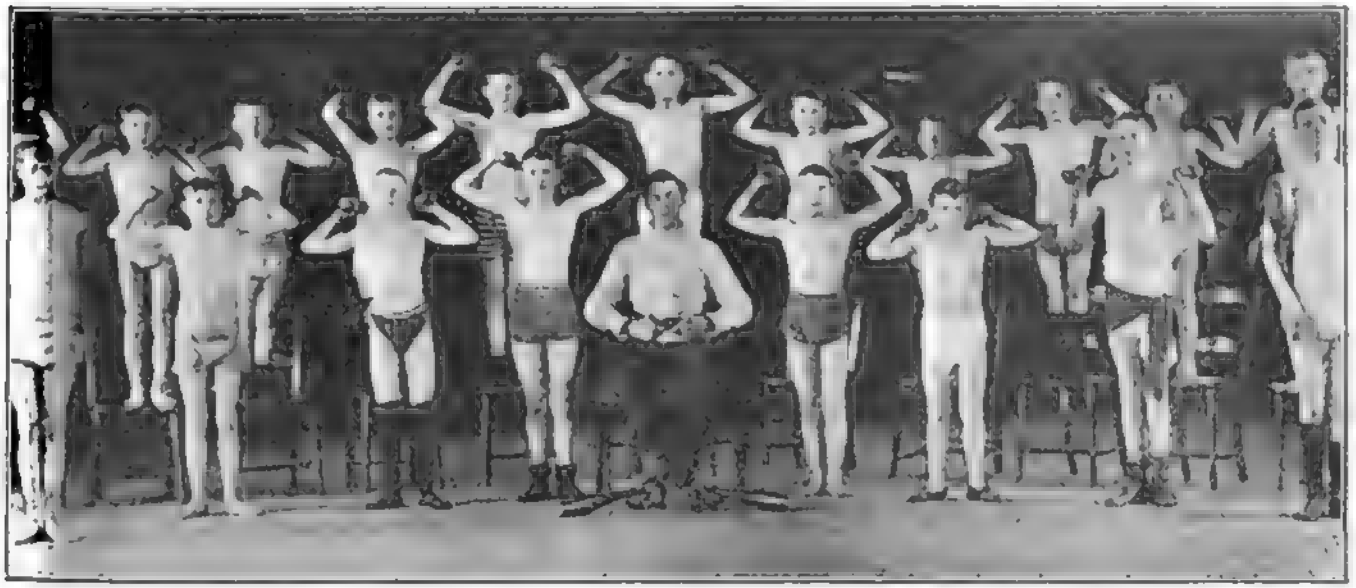
His health course includes a period of simple living on a farm, with dumb-bell exercises, riding, and ice baths. He claims that these things, regularly carried out, will rejuvenate even a man who has become very unfit physically, and it is understood that Mr. Choate has a high opinion of his methods.

EVERY MAN SHOULD BE KING OF HIS OWN BODILY KINGDOM.

By AURETTA ROYS ALDRICH.

THE first step in self-help, after making the best possible conditions for ourselves, is to direct the mind to other things than the discomforts of the body or of environment.

Emotions of anger, fear, or jealousy are recognised poisons for the secretions of the body, and dwelling upon any disorder is no less positive in its effects. It takes effort and intelligence to control one's thoughts; but an honest, earnest desire to do this, and persistent effort on the negative side of life. Disease is a species of defeat which, we must realise, could often have been avoided with a little more loyalty to the few phases of law that we did understand and with the certainty that taking the one step that we do know is the open door to an onward step. As a matter of philosophy and good taste we should rehearse our bodily woes as seldom as possible, and only to those who can and whom we choose to call upon to help us, just as we would confess our moral delinquencies



POOR LADS' PHYSICAL CULTURE CLASS.

The accompanying illustration depicts the poor lads' Class of Physical Culture, formed by Mr. Arthur W. Ford, of Wolverhampton. Mr. Ford is the winner of numerous prizes and of gold and silver medals, and his enthusiasm is as great now as it ever was. His example is one that other Physical Culture enthusiasts might well follow.

will certainly accomplish more in this direction than anyone can believe who has not tried faithfully. No one who values life at its best would be willing to confess his inability to control his thoughts enough to save himself from insanity or grave misdemeanor. We are very sure that no man or woman was ever a victim to either of these who had not allowed thought to wander unrestrained along lines of disorder that led to infirmities; therefore, let us try to believe that health and happiness are our birthright, and can come to us much easier if we have our thought toward them than if we dwell to those in whom we can confide to help us into larger life. In the preceding chapter, directions were given for restoring normal action to the abdominal organs. In undertaking this for one's self it is most important that brain and muscle should work together. Indeed, little will be accomplished without this co-operation. If thought is concentrated upon any part of the body it is proven that the circulation of the blood is increased at that point, so it follows that to be successful in controlling the body, one should have an intelligent idea of what is to be done. For instance, straining,

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for a movement is very common, and the whole abdomen is indiscriminately forced down. Now, while a reluctant movement may be had in this manner, harm is done and much better results could be had by thinking definitely of a movement and the peristaltic action; for this action is a worm-like, rhythmic movement, and forcing the whole abdomen down does not help but hinders this motion. A screw would not be helped into its place by being driven like a nail. It is only the waste, the unorganised matter, that is passing down, and is more easily attracted down if the organisation keeps its integrity; so while thinking of the contents of the colon as passing down by means of the peristaltic action and attraction, think also of the perfect poise of all the body upward, and remember this is an education, not something to be acquired at once, since we have lost by habit the close relation of this activity to the unconscious life.

All doctors of every description are dealing with constipation, and with what success is well described by a doctor in the *British Medical Journal*, as follows: "It would appear, indeed, that these common objects by the traveller's way (advertisements for aperients) show that the cry of the people is not so much for light and leading as for laxatives. It is a curious comment upon the unfitness of the alimentary canal for its simple duties that the animal, the vegetable, and the mineral kingdoms have been ransacked to provide incentives to peristaltic action. Wherever the truth might lie, it would appear evident that this much-physicked organ is not competent to deal with the requirements of the alimentary canal of modern man, or, at least, that it performs its duties in the halting manner of a worn-out machine." If this is the best encouragement we can get from those who are supposed to be guardians of our health, shall we not defend our birthright by taking up the gauntlet and deal with nature at first hand?

The allopath and the patent medicine man—and their names are legion—with their cathartics, homœpathy with "small pills," osteopathy with scientific manipulation of the "structure to secure perfect functions," the electric healer who supplies "vitality to the worn-out body," the metaphysical or mental healer who refuses to recognise matter, since all "matter emanates from mind," the Christian scientist who holds that "as God fills all the universe there is no wrong thing only as we make it wrong by our thought," that "the waste of the body can do no harm unless we think it,' and that "prussic acid is the same as milk except as our need and thought make a difference"—all these are working to cure inactive bowels. Dr. Hall believes in "washing the colon every day through life as one would bathe every day." Tons of medicine are sold and taken to increase activity of the bowels. All these promise to cure, and yet the evil grows.

So, now, just here is the place where self-respect and self-help can come to the rescue. After washing the colon, as we would wash any other part of the body if it were soiled, since water alone is provided by nature as a cleansing medium, give a few minutes, as has been described in the foregoing chapter, to the physical reconstruction of the organs, and let this be accompanied by strong, mental suggestion and direction. No baby ever reached his hand out to touch his mother's breast, face, or inviting hand, or his first bright ball or other plaything, except through desire. If we watch the budding intelligence we shall see how the eyes are fixed, the little mouth puts on the promise of character and the hands struggle, unsuccessfully at first, to go even in the direction of the desired object; but day by day, out of this seemingly chaotic desire of control, grows the firm, strong grasp of the inviting object of the baby hand, and the first obedience of muscle to mind begins. An idiot is so because he cannot send his desire, his mental invitation, out into the muscles. There is nothing the matter with his muscles, and brain can grow only by reciprocal action of muscle and brain. The civilised human being at present has little definite control over any part of his body except his limbs. The desire of possession is the first instinct that unites brain and muscle; hunger being the first

claimant for muscular service. All through life, muscle obeys mind by the same law of desire followed by effort. A painter, a musician, a mechanic makes his hands serve and obey implicitly the direction of his will for definite results, while often his whole body besides is an undiscovered country, and he at the mercy of untrained nerves and muscles. The acrobat or the Fiji Islander uses his whole body in a marvellous way. Both these show what the body can do simply by direction. But this direction must be a steady, intelligent force for definite results. We may choose to be a musician, a painter, a mechanic, an acrobat, or a tight-rope walker, and only feel responsible for success in the line of work we have chosen; but to *live* is not of our choosing. We find ourselves endowed with life which is put into this environment of bones, muscles, and nerves, from which we cannot separate ourselves. Every known law obtains in this body and the conscious thought—the I—is placed over this mysterious and wonderful kingdom to rule it for good or ill. No atom of law can be violated with safety, and yet we go on, ignorant of, or disobeying every law of triumphant life to which we ought to be consecrated, and which, in the end, determines triumph or defeat, and follow only that which will temporarily further the interests of our chosen business or profession.

Let us once set ourselves to the ennobling task of constructing or educating the body along the lines of our best thought, by using every muscle as rhythmically as can be done. Rhythm is life, and any deviation is disease.

Let us attack this one enormous and offensive hindrance to our well-being—constipation—and we shall rid ourselves of a much greater tyrant than has ever been written in history or story. We must awaken all the muscles of the body, not the few large muscles that carry the body, but the pelvic muscles and those around the stomach and chest; free the back muscles so that circulation may invigorate the spinal column. The facial and throat muscles are important so that vocalization may be without tension. Above all, direct any movement with concentration, knowing that muscle will obey this intelligent concentrated thought. Uncertain direction is a confession of weakness, and is demoralising. Because the peristaltic action is out of sight is no reason why it should be beyond our control. Every muscle has its ganglion or nerve centre in the brain, and can be directed. Do not be discouraged because it does not come at once. We are just beginning to learn that the body is ours to control and that he who directs it successfully is a monarch and, therefore, possesses the universe so far as he can make use of it.

It really seems as if every phase of science to cure the ills of the body has been exhausted, and in sheer self-defence we must fall back on the science of prevention of disease by construction, so that we may, through law, be the builders of our own completed lives.

Let no one think himself too old to take up the reconstruction of the body. If there is anything we owe to the world it is that the time to mend our ways is when we find ourselves in the wrong at whatever age. If the years give us less elastic muscles, they give us less elastic wills. We have a right to more concentration of thought and stronger and more definite purposes in Nature than in early years.

One of the most pitiful things in life is the legacy we leave our children in the belief that to grow old is to lose the flexibility and poise of the body, the play of expression in the face, the interest in all that beautifies and gladdens life and the interests of children. Why should we not find our interest increasing with the years in everything that pertains to the complete life of the body, so that children may see that time is a generous giver and brings new treasures for heart and brain without loss of poise and without the discrepitude that is associated with growing old?—*Life, and How to Live It.*

At the recent contest in oratory a Zulu prince took the medal at Columbia University, New York.

The Annual Conference on Negro Problems, which has just met at Atalanta, had for its subject this year "Health and Mortality." The statistics presented showed that while the negro death-rate largely exceeds that of the whites, yet there is improvement.

ON BEING DONE GOOD.

By Edward B. Lent.

It is given to few men to make fun of their infirmities and laugh at their aches and pains. Mr. Edward B. Lent is one of the exceptions. The following extract is from his all-through amusing book with the above title. Needless to say, the writer is, as the style betrays, an American.

THE conservative thing to do when you have a pain is to hire a doctor. This is in accordance with established custom. And the most conservative course to follow is to engage a physician of the old school, one that the homœopaths call an allopath, and that the allopaths call, a regular.

The theory of this ancient school of practitioners is that a strong dose is required to remove a pain. They seek to cure their human victim by surcharging his alimentary system with some drug extracted from Nature's bountiful supply. The idea seems to be to get enough of the drug into a man to change the colour of his blood, or thoroughly to disinfect his vital organs and thereby tinker with what they are pleased to call the metabolism until the machinery is in proper running order.

Four years ago the author took what appeared to be a rheumatic pain to an old-school physician. He prescribed salicylic acid. Now, the theory is that salicylic acid makes a bee-line for the painful spot and removes from the tissues and joints the uric acid deposits that are intruding on the nerves. Practically, however, it is known that the acid destroys the functions of the human stomach while *en route* to the back. The net result of this treatment is that your back is better, but you can't eat for a few weeks. Until some means of dispensing with a man's stomach and its immediate accessories are devised by this school of medicine, it occurs to the experimented-upon that salicylic acid will be an ineffective drug. When emergencies of this character happen in the plumbing business, they construct what is called a by-pass—a sort of elbow which carries the water around an obstacle. Let a by-pass be introduced into the human system so as to avoid the stomach. Then salicylic acid or any other form of dog poison may be administered without upsetting the digestive apparatus which is even at this late day so necessary to sustain human life.

Salicylic acid is only one form of the salicylate group. The members of this group must be taken, one at a time and all together, before a complete test and wreck are effected. After this course, a man's stomach, which should resemble tripe as we see it in a state of nature and at the butcher's, becomes of a lovely green-brown, with white ulcerations. This colouring spreads like dye-stuff in a mill stream and makes itself felt everywhere—principally in the mouth. The dark-brown taste of the morning after is as nothing to the green-brown taste of this morning. The tongue shows forth the symptoms of a change and a tired early-Spring feeling settles upon the victim.

While in this state of lethargy, it is fit that stimulating outward applications should be made to extract the stagnant juices from the creaking joints. For this therapeutic purpose Nature built the Spanish fly. Most flies bother us while they live. It remains for the Spanish fly to get in his work when dead and pulverised. Nearly every druggist keeps in stock a jar full of Spanish flies. These insects do not lose any of their strength by being a long time dead. They are about an inch in length, with plumage as brilliant as the potato bug's, and give forth a perfume quite as far-reaching. For purposes of accurate comparison, a knowledge of farming is necessary, and that the writer has had, particularly in the potato bug department. When a mere lad he was set to work removing these bugs from the potato plants and destroying them one by one, in the way originally adopted, viz., by squeezing the bug into kingdom-come between the

thumb and first two fingers of the right hand. Farmers who now call for "spiritus frumenti," at the leading town bars, are frequently seen to hold up two fingers of the right hand and ask for "bug juice." A sense of the origin of the term seems to be near them.

The artful druggist makes an ointment with the fly dust, and when this is placed over the joint which has put the walking mechanism out of order, wonderful changes seem to take place. Joint? Why, it would animate an opium joint! This application of the allopath gives the victim something entirely new to occupy his thoughts. In a few hours the place where he has stored his rheumatism is indicated by a lubbering blister which is soon reduced to a map of Australia done in red. In all the thirty-three degrees to be passed through to become an adept in rheumatism, nothing produces greater amiability than this device. Still, when you realise that you are being done good, you don't mind so long as they skin you in a two-by-two patch at a time. Similar treatment might kill a horse or a dog, but the human jogs on, full of cuss words and hope. He consoles himself with the thought that these old-school physicians have passed beyond the stage of experimentation, and that while their methods may seem painful, they are sure. In a philosophic frame of mind, a dozen or so of blisters on the material frame are no great matter. Look at Job! Most of a man's blood rises to the surface, in the vicinage of the application, and he assumes the appearance of a ripening tomato, that part of him which is away from the flies not maturing so fast as the rest of him. When the blisters heal, an improvement is noticed. The patient thinks about his victuals and is able to sleep. It is also noticeable that the rheumatic pains are no worse, and that the joints appear to be no stiffer. This experience with the flies makes a man understand that he might, indeed, be worse off.

At the time of the Spanish Inquisition, it was found that if red hot irons were placed to cool on a man's back, certain phenomena were to be noted. The monks, the scientific men of that day, occasionally made records of their conclusions as to this process. Some valuable data no

VICTOR SAMPSON.
Who, at Kimberley, recently swung 2 lb. clubs for 12½ hours per day for six days, beating Tom Burrows' record of 12 hours per day in same time.

doubt has been lost, but enough remained when that Frenchman, Paquelin, made his exhaustive study of the subject to result in the cautery name for him. The Paquelin cautery is an indispensable article in the surgical outfit of any up-to-date physician. Briefly described, it is a round piece of one-quarter-inch steel, eight inches long, with one end slightly flattened. It is hollow, so that a stream of ignited benzine may be forced through the flattened end, with a rubber tube and ball; in fact, it is almost the same thing as the burning tool supplied with a pyrography outfit. A red hot poker would answer every purpose, but Paquelin got this thing up to stay red hot all the time. A poker keeps red hot long enough to brand a steer, or burn the spavin on a horse. No such momentary tickling will answer, however, for the human animal. For him, let it be red hot, and plenty of it.

To be done good, by the cautery, the victim bares his back and the doctor proceeds to swipe. The odour of burning flesh quickly fills the room. The most rheumatic victim becomes spry. He does the czardas, the hoochee-koochee, the can-can, and the Highland fling, and accompanies himself with song. The doctor is surprised, and says the young women come to him especially for this form of nerve tonic. In your mind's eye you see whole trainloads from young ladies' seminaries coming to town to sample Paquelin's popular pacifiers.

To cool off a nervous man, drop a little hot iron on him. His knowledge of comparative temperatures is thereby increased, and while he may run up to the boiling point and steam in his language, he will as quickly subside to sub-normal. Tyndall demonstrated heat to be a mode of motion. A man with hot iron on him goes through all the modes of motion there are.

Mustard plasters are next recommended. These inventions, you are informed, are the great pain extractors. Up to this time, the writer's only experience with mustard plasters had to do with one he made and placed on the exiguous stomach of a literary friend. That plaster saved his friend's vermiform appendix, and also his valuable young life. The great efficacy of this application was due to the fact that it was nearly all mustard, with only a little self-raising pan-cake flour added; and, what was more important, it was smeared good and thick all over the seat of misery. This, with copious doses of morphine, lulled the patient into forgetfulness and caused him to see fish at his bedside. Thus we left him fishing and happy. In two months he was about again.

Reverting to the author's case, it was determined to apply a long, narrow mustard plaster from the nape of the neck to the last nodule on the coccyx. The coccyx is what remains of the tail which our arboreal ancestors used as a suspender when they wished to drop more easily from limb to limb in their forest home. Evolution has reduced this once elegant and tortuous appendage into a mere ankylosed stub, but it is large enough for all practical purposes in the modern home; at least, such is the conclusion which has been reached by the leading women's clubs which have debated the subject. By the Darwinian theory of reversion, however, the continued crowding of trolley cars may restore this missing member, so that ladies and gentlemen who are compelled to stand up may twine their fifth limb around the strap rod and comfortably hold the baby and bird-cage, or read the newspaper. What those who are sitting will do with theirs, we leave to them or the tail (ors) to decide.

Again reverting to the personal case, the plaster applied was of the regulation home-made variety, planned, built and stuck on by the author's wife, who has ever been a faithful help in these times of fleshly mortification. The sun-burnings of twenty summers were as nothing to it. Along the entire track of its operations, from head to coccyx, it set the blood to dancing as gleefully as a burning glass could have done it. While we cannot conceive of a rhinoceros being done good by so mild an irritant, we feel reasonably envious of any animal with a ten-inch hide, because after the exercises he could bury himself for three weeks in mud, as at Carlsbad and Mt. Clemens. A soothing thought.

Thousands of kidney washes are on the market. Tap water is as good as any of them for washing down the Malpighi and

removing the incrustations from the colonial front of the Bertins. Water at champagne prices, however, is more highly regarded, because it contains more of that scouring grit called lithia. These waters you drink until the cellar is full of old bottles. As the reform administration will not remove them, and the junk men say they can't handle them, spring water-drinking ceases as these containers begin to encroach on the upper bedrooms.

During this period of internal and external treatment, the medical man holds the patient to a strict diet. This is important. The Diet of Worms was important, too. Wonder why it is not prescribed?

But they say—these doctors—that flesh food contains uric acid and other injurious by-products, and so is to be shunned. Our physiologists told us in early youth that the human stomach is pyriform. Yet there must be no pie. A learned writer on psychological subjects, in a recent work, digresses for a page or two from his text to prove that American pie is wholesome; that it contains only a little flour and water, spice and fruit, and that these things, taken pie-form, are none the less wholesome on that account. This same scholarly writer, with his fine equipment of intellectual resources, would also find it easy to prove that the present pyriform appendix was either originally intended for pie or has become adapted to it so that we may now eat mother's choice products without fear.

Spinach is good for rheumatics. Eat parsnips, too, if you want to, though not over eighteen or twenty at a meal. Beware of potatoes. The water in them is all right, but the starch sets up an uneasy ferment, and ferments make acid and acid makes rheumatism. Apples are good, but no seed fruits or canned fruits are allowed. Eggs contain dangerous animal by-products, such as feathers, and are therefore stricken from the list. Coffee is allowed and also tea. These are always good.

Little attention need be paid to the above dietary, however, because it is only one of twenty, each one different, which the author has had prescribed for him by as many different doctors.

Any animal except a human being knows when and what to eat. Nature protects the health of the dumb creatures by standing guard through their instincts. Man was turned loose, and the first thing he did was to eat the forbidden fruit his wife had brought home for dinner. Don't blame Adam. We all do the same thing. The tree of human knowledge grows as various members of the human race graft this and that upon it. Experimenters widen our mental horizon and enable the pathologist and toxicologist to jot down interesting conclusions at the autopsy and in the laboratory.

The Sandow Bowl.

The annual race for the Sandow Challenge Bowl, under the auspices of the National Amateur Rowing Association (Thames Branch), ended in a victory for the Iris R.C. In the final heat the Iris, Cygnet, and Putney, who had won their previous heats, went away to a splendid start. Putney were the first to break the line, and at Harrod's Wharf were leading the others by three-quarters of a length. Iris then steered over to the Cygnets, and narrowly escaped a foul. Iris began to go up to Putney at the Crab Tree, and at Rose Bank were only a quarter of a length behind. Cygnet began to drop back, and were never again in it. At Walden's both the leading crews were right over on the Middlesex shore. Leaving here, Putney again drew away, and were three-quarters of a length to the good at the football ground. Iris made another effort, and went up again, and at Beverley Brook they were level. They were leading at the boathouse, and the Putney men tiring, Iris drew away, and won a grand race by two lengths, both crews being all out; five lengths between second and third. Time, 8 min. 16 sec.

After the racing, the crews met at the Putney R.C. clubhouse, and Mr. G. W. Baker having been voted to the chair, presented the winners with the trophies. In doing so, he spoke of the grand racing they had witnessed, and congratulated the Iris R.C. upon their victory, which had been won by sheer pluck. Although they on the Thames regretted the loss of the Sandow Bowl, they were all glad it had been gained by such a fine lot of sportsmen.

BOTH OVERWORK AND UNDERWORK DANGEROUS.

CONSTANT physical strain, even though it be slight, saps nervous force. To feel well, more energy must be formed than is expended. Now, while work, by stimulating the heart and lungs, produces energy, at the same time it expends it; yet, during work, more energy is necessarily expended than is formed. Energy accumulates in the rest after work; but only when rest is sufficient will the total energy formed exceed the total expended. When work is excessive rest cannot be sufficient, and we have a loss of energy.

On the other hand, if rest be excessive, as when one works too little, we still have a loss of energy, for, in this case, although the expenditure is comparatively slight, it is constant, and it is not fully re-formed, because there is little stimulation of the sources of energy.

Unless rest has been preceded by work, but little energy forms in quiescence.

To be beneficial, exercise should be stimulative and not exhaustive. Let me explain just what I mean. An exercise is stimulative when the fatigue caused by it is partial, and is, at the same time, exciting enough to attract much nutriment and oxygen to the parts involved; thus will the gain exceed the loss. All vigorous exercises are stimulative. They cannot be exhaustive, for, being vigorous, they require in their performance fairly fresh muscles; one has to discontinue such exercise when but partially tired. They are stimulative, because the blood-flow to parts vigorously exerted is far greater and more prolonged than would be the blood-flow to parts slightly exerted. Exhaustive exercises are those that are prolonged for many hours; and these, not being vigorous, may be continued to the point of extreme fatigue.

Economy of energy, which we hear so much about, is desirable only when one performs as much work as he should, and when, therefore, any excess is injurious. Such a one may acquire the habit of resting. He should, when he can, at odd times during the day, thoroughly relax himself; learn to "take things easy." Do not rush and tear when mere habit is the only excuse for it. Some persons go always as though for a doctor or to catch a train. Delicate women, oppressed with the strain of housework, would be benefited by breaking their work with occasional intervals of rest. They should sit when not obliged to stand, and lean back in a chair when they need not be bolt upright.

As to the amount of sleep required by the average man, I think that seven hours is sufficient. Some constitutions may need an hour more; some may do with an hour less. Growing youths and children require ten or twelve hours' sleep. A fairly good general rule is to go to bed at such a time that you can get up at the necessary hour without an alarm clock.

It is not hard work but overwork that kills. Severe work should not be practised more than three-quarters of an hour three times a week. Easier exercises may be done every day.

If one wishes health and long life he should not force himself to work after he is fatigued by exercise, and he should never attempt anything that is beyond his strength. If it be true that "grinding" is wearing, it is indisputable that proper exercise is vitalising, and conduces more than all else to a long and vigorous life.

The length of time required by proper exercise is insignificant, half an hour three times a week of real work being sufficient. Let the business or professional man who has no time for a gymnasium keep two or three pairs of moderately heavy dumb-bells under his bed. Let him exercise with these in the various ways I have suggested. He may also, if he can spare the time, perform some of the home exercises already given. Nor is there anything to prevent his hanging a punching-ball in an open doorway. If he will not run in the street, he can run up and down his own stairs, taking two steps at a time, and thus finely exercise his legs and lungs.

HOW TO ESCAPE SEA-SICKNESS.

JUST now, when cross-channel trips are so popular, these methods of combating sea-sickness will doubtless be read with interest. Even so-called "seasoned" ocean travellers and sailors themselves do not escape these seizures. Lord Nelson, the great British naval commander, confessed that he never started on a voyage without suffering in this way.

Scientifically, the cause of sea-sickness is the disturbance of the pneumogastric nerve actuating the digestive tract caused by the change from the firm and stable footing furnished by solid land to the yielding and insecure surface of a ship's deck. Many persons experience the same symptoms while travelling in a rapidly moving, swaying train.

The effort to maintain the body's equilibrium to these changed conditions brings on nausea.

In the first place, common-sense should direct one, at the outset of a voyage, to seek that part of the ship that is least affected by the motion of the sea. This is amidships, where a gentle rising and falling motion is nearly always apparent, even in the calmest weather, but where pitching and rolling motions are the least noticeable.

But in taking such a position, on deck or in a stateroom, one should be careful to keep away from greasy and disagreeable odours from the engine room. When on deck, the companionway is especially to be avoided.

Persons endowed with strong minds and great powers of concentration may often cheat this terror of ocean travel by walking the deck steadily during the first hours of the voyage, persistently yielding their whole body to the motion of the vessel, thus creating a sense of being a part of it. A great many travellers find that this practice is certain to render them immune during the whole voyage.

Another method, which demands some sacrifice of dignity, is to lie down at full length on the deck, preferably on the back. Directly this position is taken the pitching and tossing seem suddenly lessened, and the dreadful premonitory symptoms generally pass off.

To enable passengers to keep the horizontal position on the roughest sea some successful experiments were carried out on two of the English Channel steamers with a self-levelling sea bunk.

By means of an automatic electrical arrangement, the berth is kept perfectly horizontal, even in the heaviest sea.

While some passengers successfully ward off the dreaded attack by lying full length, or by reclining, with eyes closed, in a deck-chair, others find it better to remain erect, to fix the eye on the horizon or a distant ship, to walk about, hum a tune, talk, breathe deeply, timing the inhaling and exhaling of the breath with the rise and fall of the ship. It is, however, a bad thing to fix the eyes on the water rushing past the side of the vessel, the sense of motion thus aroused often upsetting persons who would otherwise have undertaken the voyage in comfort.

A remedy which has stood nearly half a century's trial is the spinal ice-bag, invented by a Dr. Chapman. After carefully studying the subject he came to the conclusion that the vomiting was caused by an excess of blood in the nervous centres of the back, "especially in those segments of the spinal cord related to the stomach and the muscles concerned in vomiting."

To lower the temperature, and so lessen the amount of blood locally, he designed a long, narrow bag with three pockets, so that the ice should not fall to the bottom of the bag. The mouth is closed tightly by a clamp, to prevent the escape of water, and the spinal ice-bag is attached to the back by means of tapes.

A more practical remedy, and probably a more efficacious one, is the wearing of a tight abdominal belt. Medical men are agreed as to the necessity of compressing the abdominal regions, at least in the early stage of the voyage, until the stomach has become accustomed to the pitching of the vessel. An ordinary handkerchief will do equally as well, provided it is tied very tightly.

Healing Power of Sunlight.

There have been sun worshippers through all the ages, and the sun has always been recognised as the source of life and light, of health and happiness on the earth. Yet it is only recently that science has found the explanation of this world-feeling and has learned how and why the light of the sun is life-giving and life-saving. It is only within the last quarter of a century that the medical profession has discovered that the cause of the great plagues of mankind—consumption, typhoid fever, pneumonia, cholera, smallpox, yellow fever, and all the infectious and contagious diseases—is due to the presence within the human body of micro-organisms. These organisms constitute the lowest forms of animal or vegetable life—single cells, invisible to the naked eye, which are reproduced with frightful rapidity when sown on a favourable soil.

By itself the knowledge of this fact would cause despair if there were nothing to arrest the increase of the germs. But, fortunately, it was found at the same time that there are forces in man and in Nature warring against the minute enemies, and that one of the most powerful of such protectors is the light of the sun.

It is now well known that sunlight is one of the most potent of all the destroyers of disease germs. It kills them more certainly than do the strongest disinfectants. The bacteria that cause pneumonia, for example, are destroyed within less than an hour when exposed to the direct rays of the sun, and live but little longer in the diffused light which fills a room on a bright day.

This knowledge has been turned to practical account in the treatment of many diseases, especially of the skin and superficial parts of the body. In lupus, for example, which is a form of tuberculosis of the skin, a positive cure may result from exposure of the diseased part to the direct rays of the sun.

The healing of wounds is promoted by light; and boils, erysipelas and various inflammations of the skin have been cured by the same means. The curative effect is sometimes obtained by simple exposure to direct sunlight, but the best results are brought about by means of lenses which concentrate the chemical rays and exclude those of heat.

For Overworked Brains.

We hear a great deal of the "rest cure" for overworked brains.

But, according to a medical man, in many cases the symptoms supposed to denote mental exhaustion do not arise from a tired brain so much as from a body enfeebled by want of exercise. When the brain is actively exerted there is considerable waste of nervous substances which should be thrown off from the body. This work would be performed by the bodily organs if they were in a healthy state, but a sedentary life results in the muscles becoming flabby, the digestion feeble, and the circulation sluggish, the result being that the waste products are retained, for sheer want of power to expel them.

The remedy, then, is gentle physical exercise gradually becoming more vigorous. By such means the brain will be invigorated and rendered able to perform its work with ease.

In the Morning.

Take a dozen deep breaths through the nose at an open window upon rising in the morning.

Put a handful or two of sea salt in your morning tub.

Exercise five minutes with dumb-bells before breakfast.

Eat oranges, grapes, or baked apples for breakfast. If you have the slightest tendency to indigestion, abjure hot breads and eat toast instead of white rolls. Cocoa, when well made, is better than either coffee or tea. Milk, with the chill taken off, is the best of all.

Walk a mile, if possible, after breakfast, and keep the mouth closed. "Mouthfuls of early morning air" are all very well in theory, but very bad for the throat and stomach.

Physical Stamina of Workmen.

A Sheffield Firm's Regulation.

One of the largest engineering firms in Sheffield, which numbers its workmen by the thousand, has issued a regulation requiring all applicants for work to submit themselves to a medical examination by a doctor acting in the interests of the firm. The regulation is said to be in force at one of the firm's branch establishments, but in Sheffield it is to be opposed. A protest against it has already been entered. It is pointed out by the men that one effect of the rule will be to swell the ranks of the unemployed. The rejected must include large numbers of men hitherto in regular employment, whom some slight physical defect may prevent from passing a severe medical examination. Employers, they admit, are compelled to gather round them the strongest and most skilful men they can command, but the universal adoption of the rule in question, they contend, would be a national calamity. A large number of those rejected as physically unfit would be thrown on the rates.—*Manchester Guardian.*

Simple Rules for Health and Long Life.

Dr. Edward Everrett Hale, who at the ripe old age of 83 is chaplain of the United States Senate, and still an active literary worker, gives some common-sense rules for governing daily life to insure the ripe fulness of years which he has attained. Among other things he says:—

A man who is doing congenial work will live longer than a man who is loafing or a man who has no aim or ambition in life, or whose work is not of a nature in which his heart and soul are interested.

The man who has something to think of, something to plan out in his mind or execute with his hand or brain, forgets his moods, and they vanish.

I don't think that the weather should affect people. They should make a practice of going out of doors in all kinds of weather, being sure that they are properly clothed on stormy days, of course.

Eat simple foods, and do not overload your stomach. In other words, know your stomach. Find out what agrees with it and what doesn't. Act accordingly.

If your brain is tired, change your work or stop it. Never work when you feel fagged out, because you cannot do any good work in that state.

All work is best done when it is relieved from time to time by other work in a different channel. But first do the task on hand. And when a thing is done, take up the next task, and don't waste any time in self-congratulation.

Round Shoulders.

The first evidence of round shoulders should be attended to. If neglected, it leads to a permanently awkward and ugly figure (some round-shouldered people look almost as deformed as hunchbacks), and to what is worse than mere ungainliness—to some chest weakness which may develop into phthisis.

Much may be done at the very beginning by procuring a well-made pair of chest-expanding braces. Exercises with a long stick are also excellent for correcting the tendency to stoop, which is the first symptom of becoming round-shouldered. Procure a long, thin stick or cane. The child should stand straight, with the toes turned out, should grasp the stick held horizontally in front of him, a space of about two feet between the hands, and then should slowly raise the stick above his head, holding his arms quite straight until they are stretched upwards to their utmost extent; he then moves them backwards, bringing the stick over his head, and slowly lowering it behind his back until his arms fall straight down behind him. This is a magnificent exercise for the muscles of arms, chest, neck and back. If it is patiently and systematically carried out for fifteen minutes (perhaps rather less to begin with) every morning while dressing, and at night while undressing, it cannot fail to improve the breathing capacity of the lungs, to strengthen the muscles, and develop a straight, strong figure.

THE OCCASIONS OF DISEASE.

By ROBERT WALTER, M.D.

[Dr. Walter is one of the very foremost of medical thinkers and writers, and a pronounced advocate of Natural methods of healing.—THE EDITOR.]

EVIL habits do not necessarily produce disease in the present at least; they only deplete the power of life until its functions are carried on with difficulty, which is disease—the diseased performance of the functions of life. The easy and comfortable performance of the functions must be regarded as good health, the result of abundance of power, no matter if the habits of life are unhealthful. Abundant vitality is the important consideration; ill-health comes whenever the vital force is reduced below the point of normal and easy action. Those whose vital resources are great, may squander them for long years before conscious failure appears, while feeble constitutions succumb much sooner, and yet neither may be able to say why he succeeds or fails. Two men may enter together the race of life and one becomes a dismal failure and the other a grand success, neither knowing why he succeeds or fails. But the successful man usually tells us that "genius is hard work"—he has succeeded because of his ability for sustained and long-continued effort, while the other has failed because of absence of inclination or ability, or both, exhausting habits in himself or his ancestry underlying his unfortunate condition.

SUSCEPTIBILITY TO DISEASE.

It is this same depletion which while it does not necessarily produce disease, renders the individual susceptible to it as well as prevents vigorous function of body and mind. For instance, torpid liver is one of the common initial conditions that both provokes disease and clouds the intellect, and if we ask why the liver is torpid, the only answer can be that it is unable to do its work for want of power. The individual is himself overworked and so reduced in vigour, or he has been forcing upon his liver extra burdens through improper food, either excess in quantity or error as to quality. When the liver fails as an excrementitious organ, impurities, of course, accumulate, and other organs, especially the kidneys, undertake the work which the liver has failed in doing. The bowels also suffer for want of the lubricating bile, and even digestion fails for the same cause.

What is true of the liver may be true also of the kidneys, bowels or lungs. Torpid bowels follow torpid liver, and by and by the sewerage of the system is obstructed, and the blood becomes poisoned as effectually as though the individual were breathing sewer gas. The air about some country backyards' privy is often little worse than what many otherwise cleanly persons are absorbing into their blood from their bowels daily. The kidneys may also be overworked and inactive, causing retention of poisons that provide serious consequences. Or the lungs may be feeble and the air breathed impure. Or catarrhal secretions may accumulate in the nose or throat, and being left to dry and decay, may infect all the air one breathes. Or the surface of the body as well as the interior may be neglected, yielding poisons to be absorbed; though there are twenty chances for absorbing impurities from within to one for absorbing them from without. But no matter whether from within or without, the blood of all invalids and most well people, contain impurities in sufficient degree to render it a rich soil for the growth and development of Nature's scavengers known as germs, which underlie the most dangerous diseases of our day.

We have thus in short phrase sketched three classes of occasions, usually called

causes, of disease which may be well denominated :—

1st : The Remote or Predisposing.
2nd : The Proximate or Existing.
3rd : The Exciting or Incidental.

The occasions are called *remote* when they are not obviously connected with the disease, and *predisposing* because they prepare the organism for disease which may not come for years if the vitality is abundant enough for vigorous function in spite of them. Of themselves they cannot produce disease; they only compel increased vital action, which depletes the power expended in the action, permitting impurities and obstructions to accumulate, and so render necessary, sooner or later, some extraordinary process of purification and repair which is properly called disease.

THE GREAT DELUSION.

It is in this connection that the greatest delusion that ever afflicted humanity is most clearly observed. All the pleasures of life grow out of vital activity which not only expends vital power, but in this expenditure gives to the subject such a feeling of strength and vigour that he imagines that he is gaining from the activity just what he is losing. In other words, the power which he seems to be gaining through his indulgence, is the power that is going from him into work done in resisting its baleful influence. Whisky and tobacco, as well as stimulants and tonics, cause vital activity, increase vital expenditure and so take out of the man just what he imagines they are giving him. They never had any vital power, and so cannot give what they do not have, but they cause manifestation of power, which is power coming out instead of going in. It is the old story of the prodigal "wasting his substance"—his inheritance—in riotous living.

The correctness of this conclusion is thoroughly sustained by the fact that any use of stimulants increases the necessity for further use. They never satisfy. The more one uses of them the more he wants; he grows continually weaker in the very direction in which they seem to make him strong. And this is true whether administered by the physician, swallowed as a patent medicine or purchased at a saloon.

THE PREDISPOSING OCCASIONS

or causes of disease, therefore, are those which render the organism susceptible by befouling or poisoning the blood and tissues, depleting the power of life and rendering necessary some extraordinary purifying process, properly called disease. The cure must come by correcting the habits. Men must cease sowing "wild oats" if they would reap a harvest of good wheat. "Do different, sir, do different," was the old German prescription, and it was a good one. Different conduct will surely bring different results. "Cease to do evil and learn to do well," and a harvest of good things will surely come. It were absurd to suppose that a dinner-pill can pay for a gluttonous feast, or that a doctor can absolve one from his physical sins, all the while he continues to indulge them. All curative power is in the man, but if he would be cured he must cease making himself sick. He may not be conscious of any evil effects from his indulgences, but that is all the more reason to suspect them. In accordance with the law, when the immediate effect seems good the ultimate effect is apt to be bad. Opium, whisky, tobacco, etc., are dangerous, chiefly because they seem so comforting and strengthening, a principle which holds good with every other agency.

Burning Oneself Up.

A patient was arguing with his doctor on the necessity of taking a stimulant; he urged that he was weak, and needed it. Said he, "But, doctor, I must have some kind of stimulant. I am cold, and it warms me."

"Precisely," came the doctor's crusty answer. "See here, this stick is cold," taking up a stick of wood from the box beside the hearth, and tossing it into the fire. "Now the stick is warm, but is it benefited?"

The sick man watched the wood first send out little puffs of smoke, and then burst into flame, and replied, "Of course not; it is burning itself."

"And so are you when you warm yourself with alcohol; you are literally burning up the delicate tissues of your stomach and brain."

PEOPLE WHO BREATHE POISON.

By J. H. Kellogg. M.D.

THE purpose of breathing is to obtain from the air a supply of oxygen, which the blood takes up and carries to the tissues. Oxygen is one of the most essential of all the materials required for the support of life. Its function in the body is to set free or to bring into action the energy stored in the tissues in the form of digested or assimilated food. The amount of oxygen ordinarily required for this purpose is about one and one-fourth cubic inches for each breath. As the blood passes through the lungs this amount is absorbed, when the breathing movements are sufficiently deep and active and the air inhaled is of good quality. In the place of the one and one-fourth cubic inches of oxygen taken into the blood, a cubic inch of carbonic acid gas is given off, and along with it are thrown off various other still more poisonous substances which find a natural exit through the lungs. The amount of these combined poisons thrown off with a single breath is sufficient to contaminate and render unfit to breathe three cubic feet, or three-fourths of a barrel, of air. Counting an average of twenty breaths a minute for children and adults, the amount of air contaminated per minute would be three times twenty, or sixty cubic feet, or one cubic foot a second.

Here is an important fact which may be easily remembered and made of practical use as a means of determining the amount of fresh air required for a family or the ventilation of a schoolroom or a church. The importance of a constant supply of fresh air may be readily illustrated by simply holding the breath. Very few persons have sufficient resolution to stop breathing for two or three minutes, though experienced divers are sometimes able to hold their breath for a somewhat longer time. The breathlessness which results from a few moments' active exercise is due to the urgent demand of the tissues for oxygen.

It is not, however, the need of oxygen which renders important a constant and adequate supply of air by means of ventilation. Ventilation is needed chiefly for the purpose of washing away the impurities which have been thrown off from the lungs, and which have rendered the air of the occupied apartment unfit for further breathing. There is an abundance of oxygen, but it is impure and unfit to breathe.

Everyone should become intelligent in relation to the matter of ventilation, and should appreciate its importance. Vast and irreparable injury frequently results from the confinement of several scores or hundreds of people in a schoolroom, church, or lecture-room without adequate means of removing the impurities thrown off from their lungs and bodies. The same air being breathed over and over, becomes densely charged with poisons, which render the blood impure, lessen the bodily resistance, and induce susceptibility to taking cold and to infection with the germs of pneumonia, consumption, and other diseases always present in a very crowded audience-room.

Suppose, for example, a thousand persons are seated in a room forty feet in width, sixty in length, and fifteen in height; how long a time would elapse before the air of such a room would become unfit for further respiration? Remembering that each person spoils one cubic foot of air every second, it is clear that one thousand cubic feet of air will be contaminated for every second that the room is occupied. To ascertain the number of seconds which would elapse before the entire air contained in the room will be contaminated, so that it is unfit for further breathing, we have only to divide the cubic contents of the room by one thousand. Multiplying, we have 60 by 40 by 15 equals 36,000, the number of cubic feet. This, divided by one thousand, gives thirty-six as the number

of seconds. Thus, it appears that with closed doors and windows, breath poisoning of the audience would begin at the end of thirty-six seconds, or less than one minute. The condition of the air in such a room at the end of an hour cannot be adequately pictured in words, and yet hundreds of audiences are daily subjected to just such inhuman treatment through the ignorance or stupidity of architects, or the carelessness of janitors, or the criminal negligence of both.

Another Fine Group of Sandow Pupils.

1. VICTOR SPYERS, H.M.S. "Vernon."
2. J. M. ROWLANDS, Chesterfield.
3. A. WALTER, Hulme.
4. S. F. DOVE, North Walsham.
5. A. F. BELL, Slough.
6. W. MARKHAM, Andover.
7. D. SMITH, Colne.
8. H. C. COOKSLEY, Wolverhampton.

CAN WOMEN EQUAL MEN AS ATHLETES?

By E. HJERTBERG.

IN view of the fact that this season girls have succeeded in breaking all their own previous high records for muscular skill and strength, this question once more presents itself most pertinently: Can women ever equal men athletically?

In the minds of a great majority of people to whom one might propound such a question, there is but one answer, and that a very quick and, indeed, a somewhat resentful affirmative. Why shouldn't women equal men in athletic as well as in intellectual and artistic attainments? they argue gallantly. Look what women have done in both fields. Consider what a short time they have been at it, too, and then stop and consider how much they might have done had they been allowed equal opportunities with men.

Such is the line of reasoning followed by the feminist propagandist of either sex, for to-day this superlative faith in the ability of women to cope successfully with men is not restricted always to the sex most vitally interested. So well, indeed, have the fair candidates pursued their campaign, and with such enthusiasm and good faith have they set forth their arguments for the fundamental equality of the sexes, that not infrequently the better judgment of otherwise clear-headed men has been temporarily obscured. There has been a tendency to predicate of a whole sex the capacities and attainments of the individual unit of that sex. Especially has this been so in the masculine estimate of woman's value in athletics. It is not too much to say that early in the history of feminine athletics, men did look forward to some day facing a dangerous rivalry.

But now all such fears are past. Time and the unlimited opportunity afforded women in every field of athletic endeavour have combined to place her at something of her true value muscularly. In other words we have been slowly but constantly awakening to the fact that what we once interpreted as fundamental equality is after all only the precocity that characterises the female both muscularly and mentally—a precocity by no means confined to the female of man as a species, but alike conspicuous in all other mammals. This greater precocity of girls should always be taken into consideration in determining their value in any contest in which they engage against men. This biological factor is a psychic as well as a physical fact. Careful investigation in many parts of the civilised world, and notably in America, where the school system renders such sexual comparison easy and reliable at all ages, shows this greater precocity of girls to be a fact psychic as well as physical. A girl at the age of fourteen is, on the average, taller and heavier than a boy at the same age. Corresponding to this is a mental difference which renders the average girl of fourteen quicker, more intelligent, and gifted with a better memory. In the comparison of girls and boys as regards physical and mental qualities, it is constantly found that the girls hold their own, and in many respects more than hold their own, with boys up to the age of sixteen or seventeen, after that the girls remain almost or quite stationary, while in the boys the curve of progress is continued without interruption. This greater precocity of girls is, however, some will agree, an artificial product due to certain mistakes in our methods of civilisation, attributable in a large part to the confined home-life of girls and to inherited weaknesses transmitted them by a long line of female ancestors similarly confined.

The conclusions are exceedingly plain and simple. Women can never equal men in athletics, and they need never hope to do so, because physically as well as mentally women will always be different from men. There is a fundamental

inequality between the sexes rooted in organisation. The well-intentioned efforts of many pioneers in the woman's movement to treat men and women as identical, to force women into masculine moulds, were as mischievous as they were useless. Women are muscularly inferior to men; there is a wide difference in their muscular systems. This biological factor we must never lose sight of in a discussion upon this topic. The difference in muscular systems we must regard as fundamental. Fundamental differences in the organisation of the body cannot fail to involve muscular differences, as well as differences in the nervous system generally, and in that collection of nervous ganglia we call the brain. In this way the special adaptation of woman's body to the exercise of maternity cannot fail to effect not only the mind but the muscle. It is not, we must remember, necessarily the exercising of the internal function which causes this difference.

Although the extreme muscular weakness of average civilised women as compared to civilised men is, as we have already admitted, certainly artificial and easily possible to remove by training, still it must be remembered that even in savages, among whom the women do most of the muscular work, they seldom equal and never exceed the men in strength, any superiority, when it exists, being mainly shown in such passive forms of exertion as bearing burdens. In civilisation, even under the influence of careful athletic training, women are unable to compete muscularly with men, and it is a significant fact that there are few "strong women" on the variety stage, although women have for generations been training themselves as public performers in gymnasiums. It would seem that the difficulty in developing great muscular strength in women is connected with the special adaptation of woman's form and organisation to the maternal function, and so long as her form and organisation continue to be thus specially adapted, we must regard even such brilliant records as those of the Vassar girls as only another proof of the scientists' theory of the precocity of the young female human. We must remember that women's records in college athletics, as well as those gained on the golf course and in the tennis court, are necessarily, after all, women's records. Remarkable as they have been, it has been a distinction over other women, not over men. Thus far women have not succeeded in breaking any men's records. On the contrary, repeated attempts to do so have resulted only in leaving them further than ever from the goal. And so long as men are men, and women women, it must always be so.

Sleep on your Right Side.

It is better to go to sleep on the right side, for then the stomach is very much in the position of a bottle turned upside down, and the contents aided in passing out by gravitation.

If one goes to sleep on the left side the operation of emptying the stomach of its contents is more like drawing water from a well. After going to sleep, let the body take its own position. If you sleep on your back, especially soon after a heavy meal, the weight of the digestive organs and that of the food, resting on the great vein of the body, near the backbone, compresses it, and arrests the flow of blood more or less.

If the arrest is partial, the sleep is disturbed, and there are unpleasant dreams. If the meal has been recent or hearty, the arrest is more decided, and the various sensations, such as falling over a precipice, or the pursuit of a wild beast, or other impending danger, and the desperate effort to get rid of it, arouses us; that sends on the stagnated blood, and we awake in a fright, or trembling, or perspiration, or feelings of exhaustion, according to the degree of stagnation and the length or strength of the simulated nervous effort made to escape the danger. Eating a large, or what is called a "hearty meal," before going to bed, should always be avoided; it is the cause of nightmare, and sometimes of sudden death. The best thing to take just before going to bed is a cupful—no more—of warm (not hot) milk. This diverts the blood from the brain to the abdominal organs, and takes away the cerebral excitement that precludes sleep.

An American Golfer's Impressions of Scotland and Scotchmen.

SIMEON FORD was one of the speakers at the banquet of the Dyker Meadow Golf Club recently (says an American contemporary). He was in his happiest vein, and revealed among other things that he is a golfer of international experience.

To improve, if possible, my game, he said, I visited Scotland this summer. Of course, I made straightway for St. Andrew's. It is not true that the town was named after Mr. Carnegie. It was there, history says, that St. Regulus was shipwrecked with the bones of St. Andrew, who thereupon became the patron saint of Scotland. It does not say why Reg. was travelling with the bones, but perhaps he was end man in a minstrel troupe, or he may have been playing cards on ship-board, and had occasion to go back to the bone-yard. Anyhow, he had a few bones with him when he landed, and as the place is rather expensive, it was a wise precaution.

The chief industry of St. Andrew's consists of hitting golf balls by day and high balls by night, and, by constant practice, the natives have become very proficient in both pastimes. The Scots are famous for possessing a peculiar form of dry humour. Some say it comes from eating too much oatmeal, and that may be the reason why so many of them are scratch men. I noticed it myself while there. I don't think I was any more humorous than usual, but I was much drier. I was dry all the time.

For all I was so dry, Scotland impressed me as possessing a very water-logged kind of climate. If the natives knew enough to go in when it rained they would get very little outdoor exercise. I am told that the only water consumed there by the adult male population is absorbed through the pores. Travellers not inured to the rigours of the climate are advised to partake of a little stimulant occasionally—say, every twenty minutes. By this simple precaution pneumonia may be avoided, and a delicious sensation of warmth and delirium tremens imparted.

The guide book further says that whisky taken in small quantities, diluted, will be found a good drink for pedestrians. That did not coincide with my experience. Instead of aiding, I found that it interfered with pedestrianism. But perhaps I diluted mine too freely. The Scots pride themselves on their neatness. Even their whisky they take neat.

Scotland is called the land of cakes. Their cake, however, is nothing like ours. It is a mysterious composition known as a scone. A scone is a cross between a dog biscuit and a porous plaster. It is composed of sawdust and water, baked in the ashes, and it is said to be very nutritious if you can get it down. To an early diet of scones may be attributed the hardiness of the Scotch race. Only the strong survive. The weak choke to death in infancy.

Cold Feet and Indigestion.

Coldness of feet and limbs is almost invariably an evidence of indigestion. The coldness is due not to the weakness of the heart or feebleness of circulation, as is generally supposed, but to the contraction of the small arteries, preventing blood from entering the parts. There is generally an irritation of the abdominal sympathetic nerve-centres which control the circulation of the lower extremities. This difficulty is not to be removed by exercise or by any special application to the limbs, but by removal of the causes of irritation. This may be a prolapsed stomach or chronic indigestion. Hot and cold foot-baths are valuable. These act not simply on the feet and limbs, but by reflex action affect beneficially the abdominal sympathetic centres, which are in a diseased condition.

As a student of modern hygiene, I am greatly concerned for the stomach of the modern girl. She is greatly improved, of late, in exercise, but I fear not in diet. Those who live on ice-cream, soda-water, bon-bons, who are victims of teaism or coffeeism, and eat irregularly, although their faces are full, and their complexions may be normal, cannot possibly be well. If to this we add the methods of cooking which prevail in too many homes of the poor, the rich, and in the hotel kitchen, the case becomes yet graver.—Stanley G. Hall.

The juice squeezed from a ripe pineapple is the finest thing in the world for cutting the fungus-like membrane which coats the throat in diphtheria, and if used in time never fails to cure.

Hot milk sipped slowly is efficacious for relieving the throat irritation that frequently follows a severe cold or is an accompaniment of a bronchial cough.

NARCOTICS ARE DANGEROUS REMEDIES.

NARCOTICS may be blessings in odd cases, but they are dangerous remedies in every case. No doctor can foresee just what one dose of laudanum may mean to his patient. He can doubtless prognosticate the immediate results of it, but he cannot and does not know what hold it may take upon the system of the patient, especially if it is taken to alleviate a pain that is apt to recur, such as neuralgia, headache, etc., or if it be given to procure sleep or to quiet nerves.

The careless habit some physicians have of prescribing all sorts of nervines and sleep potions cannot be too severely condemned. The patient becomes nervous; he takes some quieting medicine; it is soothing to his nerves, and gives him relief; its effect is so pleasing that he will take it the next time he is nervous, and the next time, and so on, until the first thing he knows, the awful narcotic habit has fastened itself upon him. He wants the drug, he craves it, he feels he must have it, will die without it, and so it goes on till he finds himself a victim of this dreadful appetite. He cannot disentangle himself from it. He drifts along, friends are lost, self-respect gone, and he finally becomes a homeless, wandering vagrant, is picked up by the police, and sent to a prison or an asylum.

MR. THOS. D. GISHROW.
A Sandow Enthusiast who hails from Wishaw, Lanarkshire.

It is not only the poor and the ignorant that often find themselves in the clutches of this dreadful drug enemy, but very frequently cultured women and educated men become its victims and go from worse to worse, finally to end at the same place that the ignorant and unknowing find themselves. A famous physician states that in the last year they had, in a "home" over which he presides, fifteen college graduates. The morphine and the opium habit is no respecter of persons.

Surely a physician should hesitate and hesitate again and again before he prescribes a single drop of opium in any manner or form. He cannot foresee nor foretell the awful consequence it may entail upon his patient. The doctor should regard every patient as a trust consigned to his keeping, at least, for the time being. He should guard the welfare of his patient and stand responsible not only for the immediate effect of his treatment, but for the future results of it.

It is true that many people buy narcotics without a prescription, as the law, in some of the American states, allows them to do this if they buy it in the original package, but they would doubtless seldom be wanting to buy these narcotics if they had not already been started in the way of it by taking it under the doctor's advice to alleviate pain or induce sleep.

So, after all, the physician is the one to exercise caution in prescribing any sort of opiate. An honest, conscientious physician will never prescribe haphazardly any sort of drug. And a physician who would carelessly prescribe morphine or cocaine, or paregoric, or opium, or phenacetin in the form of nervines, sleep potions, headache powders, or in any other form—such a physician cannot be too keenly criticised, or too harshly condemned.

IN THE ARENA OF SPORT.

Scotland v. Ireland.

An interesting feature of the international athletic encounter between Scotland and Ireland at Ball's Bridge, Dublin, last Saturday, was the selection of those two fine athletes, Lieutenant Wyndham Halswell and Lieutenant H. C. Hawtrey, in rival interests. Hawtrey won the five miles' race at Athens, where Halswell also did splendidly, although just failing to win any event outright. Hawtrey was eligible to represent Ireland by reason of his regiment, the Royal Engineers, being stationed at the Curragh, and Halswell owes to the accident of birth his right to run for Scotland, as both his parents were English, and it was during a sojourn in Scotland that there occurred the interesting event which gives the Scots their claim on one of the grandest all-round athletes of the present day.

A Henley Record.

The entries for Henley this year reached the total of 69, which easily beats the previous best on record, fifty-eight, last year, and forty-four in 1904.

Luton's only Loss.

Luton, wishing to retain Blackett, of their last season's team, offered him limit wages, but until his case had been dealt with by the Football Association he refused to re-engage with them. In fact, he did not sign until last week, but he has now been transferred to Leicester Fosse, and in his place Luton have secured another ex-Middlesbrough player in Hogg, who has been with the north country team for the past three seasons. Blackett will be the only Lutonian missing from last year's successful side, and with five additional professionals the "straw workers" should show a bold front next season.

Daniels Breaks Swimming Record.

At the Richmond Baths recently, C. M. Daniels, the American Amateur Swimming Champion, who is entered for the King's Cup Competition, beat the English record for 100 yards, his time being 57 2-5 secs. The previous best was 59 secs. by Z. de Halmay, of Hungary, in the English championships at Weston-super-Mare last August. Daniels, who holds the world's record of 56 secs. for the distance, won the 100-metres race at Athens this year, therein defeating Halmay and Healy, of Australia.

Officer Wins Four Championships.

At the Scottish Athletic Championships, Powderhall Grounds, Edinburgh, Lieutenant Wyndham Halswell won the hundred yards in 10 2-5 secs.; the half-mile, beating J. McGough, in 2 mins. 2-5 secs.; the 220 yards in 23 1-5 secs.; and the quarter-mile in 51 2-5 secs., securing four championships. Halswell beat A. R. Downer's and J. McGough's records of three championships in one afternoon.

The Cricketer of the Season.

Tom Hayward is certainly the foremost bat of the present season. The irony of the whole thing is that a couple of years ago he talked of retiring. To-day he plays a finer and freer game than ever before, and by so doing he is helping to popularise first-class batting as much as any professional who can be named.—*P.T.O.*

London Anglers' Heavy Catches.

The first week's sport of the coarse fishing season has been satisfactory, considering that in many waters fish are not in condition yet, and that rivers have been rather sluggish. The Thames, Wey, Colne, Stour (Kent), Gt. Ouse (St. Ives), and Medway are reported in fair order, but they could do with a couple of nights' rain.

Messrs. Gilbert and Thompson, two members of the City of London Piscatorial Society, have made a heavy catch of bream, roach, and perch at Ellesmere—127½ lbs. A 47-lb. take of bream has also been secured by another member (Mr. A. G. Merrett), in a reservoir near London.

The Thames has yielded some fine chub, barbel, eels, and dace. A chub, weighing within 2 ozs. of 5 lbs., has been caught by Mr. Hambling in the Henley district. Pulborough, on the Sussex Arun, has furnished some sport for roach anglers, and good-sized roach and bream have been caught in the Stour at Grove Ferry, Kent.

Sport in salt water has been capital. Pout have come in in large shoals on the Kentish coast, and a thousand were taken one day from Deal pier. At Brighton, Eastbourne, etc., anglers report good mixed baskets.

A Japanese paper questions the uses of civilization, and gloomily remarks, "The coming Japanese woman will be six feet high, will wear hoop skirts, cowhide boots, and a scowl."

READERS' CLUB.

President - - EUGEN SANDOW.

Motto:—One may Help Many.

For the exchange of ideas, personal experience and photos for the encouragement of Club Members. Every Reader is a Club Member.

Readers are expected to act up to the Club Motto.

and for services rendered the President will award to the sender of every published idea, experience or photo, the Club Fellowship Medal as a token that the rightful owner has earned the Fellowship of the Club

Readers who do not get the Medal.

I receive very many letters from Readers which do not secure either the honour of publication or the award of the Readers' Club Fellowship Medal. These letters fail because they do not give evidence of being written in sympathy with the motto of the Club:—

ONE MAY HELP MANY.

There's too much "self" about the majority of letters. This will never do. This will not win the medal. The Reader desirous of winning it must write even his own "experience" in such a way as to afford inspiring information to others. He (or she—and, by-the-by, how is it that more of my lady readers—and I know there are very many, too—do not aspire to the winning of the Fellowship Medal) will also stand a much better chance of winning by telling what he has done to help others—if not many. Look at the splendid example afforded by Mr. W. Ford, of Wolverhampton, in his good work of instructing a Poor Lads' Class. Such Readers richly deserve the medal and, possibly, in the near future, I may emphasise the value of such higher effort by some distinctive mark. At least, that is the way I feel about it—I feel that they deserve more than those who do not do quite such good work.

Now, will you, my dear Readers, bear this in mind?

In an early issue I shall publish a list of the Medallists, arranged in countries, counties, and colonies.

Yours, for the help of many,

PRESIDENT.

Following are a few readers who have failed in the manner indicated, in the first effort they have made to win the Medal. Do not, however, be discouraged. Try again, and success to you, for it affords me much more pleasure to "pass" a Reader as a fitting recipient than it does to have to temporarily disappoint him by putting his initials on the following list: A. F. (Leeds), F. E. J. (Walsall), R. B. (Dublin), E. J. R. (Liverpool), T. B. (Willesden), G. L. (Perth), E. A. W. (Birmingham), I. J. (Belfast), B. E. R. (London, W.), T. J. (Cork), H. W. H. (Rochester), J. L. B. (Wigan), and R. J. W. (Australia).

145, Livingstone Road, Gillingham.

DEAR SIR,—I am enclosing two leaflets; the letter will, I believe, show that I am a worker on behalf of physical regeneration, and not for monetary gain. It will afford me great pleasure to see your criticism on this in your "Answers to Correspondents."

Yours very faithfully,
HENRY S. HOPKINS.

[Copy.]

AN EARNEST APPEAL TO PARENTS, GUARDIANS AND YOUNG MEN.

145, Livingstone Road, Gillingham.

DEAR SIR OR MADAM,

I want you to ask yourself what would become of us in the event of England going to war with a powerful nation in view of the fact that during the year ended September, 1905, no fewer than 375 out of every 1,000 intending recruits were rejected by the medical inspectors through lack of physical development? Think of it, 37 out of 100 were physically unfit to serve.

The chief cause of rejection was lack of chest development. And yet this and every other physical defect is easily and speedily remedied by a pleasant course of PHYSICAL CULTURE at home.

As a sculptor moulds clay to his imagination, so can I transform a poor physique to whatever standard of symmetry a pupil may desire. Dozens of pupils have passed through

my hands, and many of them have written me letters of appreciation. I offer SPECIAL TERMS TO YOUNG MEN WISHING TO ENTER THE NAVY OR ARMY. As regards fee I place the pupil's interests before my own, and should he not have the means to pay me anything, all I ask in return is that he recommends me to his friends; this action on his part and the knowledge, moreover, that my efforts have been the means of his attaining his desire, are sufficient remuneration.

Parents, it is your duty to afford your son Physical Training. Young men, I appeal with all sincerity to you to give immediate attention to your physical welfare, for the sake of the nation's future as well as your own.

I cordially invite you to come and see me any evening between 7 and 9 o'clock.

Yours faithfully,
HENRY S. HOPKINS.

[COPY.]

ARE YOU INTERESTED IN PHYSICAL CULTURE?

WILL YOU JOIN MY SCHOOL OR CLUB?

Subscription: 6d. weekly; 2s. monthly; or 5s. quarterly.

Hours: Wednesdays and Fridays, from 7 till 10 p.m.

Quarters: Council Schools, Napier Road.

If you desire health and strength, please fill in this Coupon, tear off and return,

I wish to see you on ..... *next, at* ..... *o'clock, with a view to joining your School and Club, so will call upon you at the time stated.*

Name .....

Address .....

Age .....

To HENRY S. HOPKINS, *Livingstone Road, Gillingham.*

My correspondent has gone about the work of helping others in a very practical way, and I am publishing copy of his circular and prospectus, as being likely to serve as patterns for others, especially those who from time to time ask me for particulars of how to "run" a school of Physical Culture.

A Question of Taste or Ignorance.

Health Office, Borough Hall,
Stockton-on-Tees.

DEAR SIR,—I have no doubt that you will have noticed that since the advent of your magazine a number of years ago, many magazines treating of Health and Physical Culture have sprung up.

Many of these are undoubtedly most objectionable, and I am sure that you will agree with me when I say that, instead of directing the thoughts of our youths to higher ideals and purity of mind, they do an incalculable amount of harm. Many of them seem to be the medium for advertising that filthy and abominable kind of literature, the supposed object of which is to teach how to conduct oneself, etc., etc.

The articles also of the magazines are absolutely foul. These works, after reading, leave one with the impression of having dragged oneself through a lake of mud. It leaves the mind polluted and in a dreadful state.

Now, I ask you is such stuff fit for our boys and girls to read? They are condemned by all people of intelligence, and they are bound to lead the thoughts of the young in a wrong direction.

I should like to see a word in your most valuable magazine against such literature. It is mostly those who are really ignorant who read it.

Yours truly,
E. G. POWER.

[I never criticise other magazines, as I have always tried to do as much as I can in my own way. Yours is not the first letter I have received upon this subject.—THE PRESIDENT.]

Good Work in Aberdeen.

Aberdeen.

SIR,—It is just about two years ago since I began to take an interest in Physical Culture, and that was by taking your magazine out of the library, and I now buy it every week, also all the back numbers I can get. I bought your well-known Developer about a year ago, and have got on splendidly with it, and with the aid of your books, "Strength, and How to Obtain It," and "Body Building," which I have given a few chaps a read of. When I have two magazines of the same issue, I cut out the photos. and paste them on a book, and now I have nearly seven books full of different photographs, and, I may add, yours was the first to be stuck on. It is very pleasing to look over them now and then, and I show them to my friends, for I prize my collection very highly, but not so much as the different poses I have of yourself, of which I have six framed and hanging in prominent positions in my bedroom. I have not seen a photograph nor a letter from an Aberdeen reader yet, but I don't think I'm the only one.

I am enclosing a couple of snap-shots which I took at the Gymnastic Festival here last year, showing scholars at bar-bell exercises, and I hope you can reproduce them in your valuable magazine.

JOHN ROSS.

Capital Result after Three Months' Training.

Wolverhampton.

DEAR SIR,—While walking down the street one day, a poster ("How to Become Strong") attracted my attention. Of course, every man craves strength, and the thought came to me how much I should like to become strong. As a boy, my health had been quite precarious, and I had suffered a great deal from severe headaches.

I then and there resolved to "go in" for Physical Culture, and bought Sandow's book, "Man in the Making," thinking it a shilling well invested, and I owe much to the encouragement and the exercises contained in it. I then

bought "Strength, and How to Obtain It," and I have followed faithfully the exercises mapped out in it, and am still carefully continuing its exercises and instructions. Sandow's Developer has done me good also, and cannot be too highly recommended.

I enclose herewith two photographs taken after only three months' strict observance of all of Sandow's teachings, and I feel thankful that I was not discouraged at the start, but persevered and conquered.

I have adopted the Club motto, "One May Help Many," and have earnestly recommended Physical Culture to all my companions, and persuaded them to join the gymnasium I attend.

Am 22 years old, a non-smoker, and do not believe in, or take, alcoholic stimulants.

My three favourite pastimes are wrestling, swimming, and walking, and I find more enjoyment in a good walk than spending an evening in a hot and stuffy music-hall or theatre.

I shall be pleased if you consider my photos. worthy of publication in your magazine, for if Sandow has done this good for me in only three months' time, surely there are many more young men whom he can help the same way, and I only hope my example may encourage them to take up Physical Culture at once, with invincible determination to obtain that much-coveted and priceless prize: "A sound mind in a sound body."

Respectfully yours,

JAMES HENRY PARKER.

Highly Delighted with Medal.

Salford.

DEAR SIR,—I received my Fellowship Medal to-day, and I am highly delighted with it. The headpiece of our President is the exact model of him as I saw him at the Palace, Manchester, three years ago. Wishing him and the magazine every success, which it richly deserves,

Yours truly,

W. MURDOCK.

Teaches Class Gratis.

Mumbles.

DEAR SIR,—I am pleased to inform you that I am a great believer in your system.

It is about four years ago since I started, through a friend of mine who belonged to a class at Swansea. I was a sufferer with my chest at the time, and could get nothing to cure me. He advised me to join, which I did, and soon after obtained your book on "Strength, and How to Obtain It," which I studied well, and after a few months' exercise with the dumb-bells, which I always "do" before a looking-glass, I was surprised with the results. My chest was soon all right, and I have not felt anything of the old complaint since, and am better in health and strength now than ever. I do my dumb-bells every evening, and take a glass of pure water night and morning, which I think is a good thing, also plenty of fresh air.

My friend and myself have opened a class here for the benefit of others. We instruct them gratis, and they are getting on well with the ordinary dumb-bells. We hope to soon be able to afford your Grip Dumb-bells, which I think are the best on the market.

J. H. KENT.

P.S.—Mr. Hullin will have another photo taken, and will send on with measurements.

A Prejudice that Disappeared.

Leicester.

DEAR SIR,—As a constant reader of your magazine for the past three years, I take this opportunity of writing my personal experience to the Readers' Club, of which I desire to become a member.

When I first took up Physical Culture some three or four years ago, I was very much prejudiced against it, thinking it was only good for people who had nothing else to do. But happily since then I have changed my mind, and now see the folly of my old belief.

When I commenced I joined a Physical Culture class, which I think is the best policy for anyone to adopt. Some months later our instructor left, and I was appointed to be the instructor of the class, which post I accepted. The following year I instructed at two classes, and since then I have always recommended Physical Culture wherever I go. I belong to a Young Men's Class, and I have given addresses to the members on Physical Culture and its benefits.

I cannot boast of much development, but I can boast of what Physical Culture has done for me.

I may say what induced me to take exercises was the inspiration I received when you made your first appearance at the Leicester Palace.

I still keep trying to act up to the motto of the Club, of which I should like to be a member. I hope I am worthy of a Fellowship Medal, which I shall prize very much.

W. C. SMITH.

It is Beautiful.

Paisley.

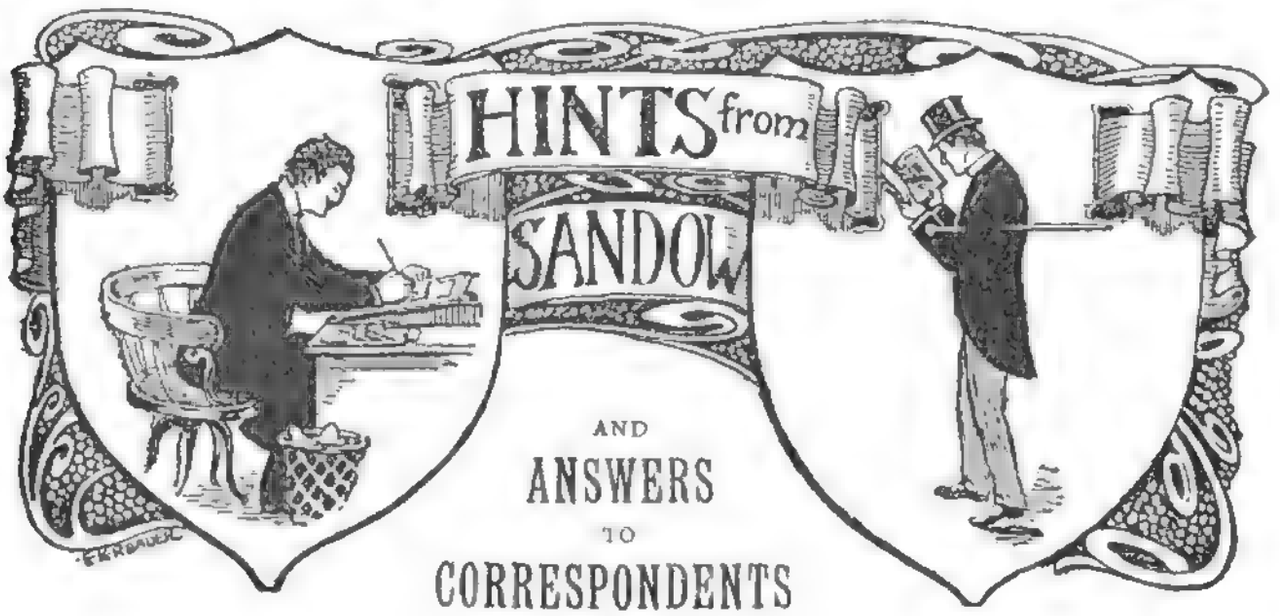
DEAR SIR,—Allow me just in a word to thank you for the "Fellowship Medal," which arrived quite safe.

A good deal might be written about its charm of design and workmanship, but I will content myself by saying it is beautiful. It has found a place on my watch chain, and I am sure it is worthy of that place on the watch chain of everyone who has the honour to receive it. Again thanking you.

C. M. GHEE.

You must Earn Health.

The well-being of the body is dependent on obedience to the natural laws by which it is governed. Nature does not distribute indiscriminately such valuable prizes as clear complexions, bright eyes, an elastic step, pain-free nerves, and a vigorous habit of body; they are bestowed on those who have worked for them. Even such retain them only on conditions; disobedience leads to their soon being taken away again, and given to those who are worthy.



Courses of Instruction and Treatment cannot be prescribed here. The attention of Readers is called to the announcement on the opposite page.

All communications relating to Instruction or Treatment by post should be addressed to 6 and 7, George Street, Hanover Square, London, W., where these will receive prompt attention. Communications without name and address cannot be noticed.

Ordinary replies cannot be answered by post.

Hoarseness.

L. R. (BRECHIN, FORFARSHIRE) writes: As a lady reader of your magazine, I should be very glad if you would instruct me how I could cure my hoarseness. I have been troubled with it for the last twelve months. I have gone through your dumb-bell exercises this last six months, thinking I might cure it, but I cannot get clear of it. If you can oblige me with any exercise or anything for it I would be very glad.

Answer: You may, of course, be provoking the continuance of the trouble in some way still, such as by breathing through the mouth instead of the nose, or by a badly modulated style of speech. Give the vocal chords as much rest as possible. Breathe through the nose, especially while exercising. Take warm bath once weekly, at night, immediately before retiring, and daily, first thing on rising, a hasty cold sponge, followed by vigorous rough towelling, preferably with hot towels.

Nasal Catarrh.

E. W. (GOODMAYES, ESSEX) writes: Having been a reader of your magazine for the past twelve months, I beg to send my measurements, to see what you think of them, and also to tell you how I have benefited by your system. Before taking up your exercises I was very thin and weak, and could not stand the cold weather, so I purchased one of your Developers, and finally a pair of Grip Dumb-bells, which I think are the best. I exercised every morning, and in a few weeks I felt a different person altogether. That tired feeling had gone, and I began to feel quite bright and happy. But I suffer from nasal catarrh, and should be very pleased if you would tell me, through your magazine, if there is any cure for it. I wish you and your magazine every success.

MEASUREMENTS.

Age	15 years	Calf	13½ in.
Neck	14 in.	Biceps	11½ in.
Chest (Nor)	34½ in.	Forearm	10½ in.
Waist	26 in.	Weight	8st. 10lbs.
Thigh	20 in.	Height	5 ft. 4in.

Answer: There may be some obstruction, such as a growth, in the nasal passage. See a doctor. At the same time, I would point out that nasal catarrh is a very stubborn ailment, and takes a lot of shaking off. Do you breathe through your nose? You should.

More Wrestling.

A CONSTANT READER (ST. ANNE'S-ON-SEA) pleads for more wrestling news and photos. of strong men.

Answer: Well, there's very little wrestling going on just now, but I will see what I can do. In regard to the statements to which you refer, I do not take notice of such things.

Answers to Correspondents

Are necessarily so brief as to leave much —very much—to be desired in regard to proper direction of Readers' training.

This is especially the case where any ailment exists that affects development.

If you are troubled with the early or advanced stages of indigestion, constipation, loss of vigour, insomnia, or other nervous and functional disorders, you really need very careful and continuous direction if you are to get the better of your trouble as quickly as possible, and thus at the same time lay a firm foundation for your future health and strength of body and mind.

I will gladly assist you if you would like me to do so.

In the first place will you please apply for a copy of my book explanatory of my *curative treatment.* I shall be pleased to send it to you as a Reader free of charge, and post free. The book contains details in full, and also includes a blank form containing questions which you will find will enable you to state your case wonderfully clearly. My advice and direction of your treatment would be based on your replies to these queries, and as affected by later reports of your continued improvement under my personal direction.

Please address me personally, and I will quickly send you book and full particulars for your guidance.

Eugen Sandow, Dept. S., 17 & 18 Basinghall St., London, E.C.

COLDS THE RESULT OF POOR VITALITY.

"What is a cold?"

It is a low degree of vitality, caused by too rapid consumption of the corpuscles of the blood. When the blood corpuscles die in great numbers the system is overloaded with the carcases of the same, a condition which, of course, gives rise to weakness, weariness, vital depression, poison in the system, inflammation and serious diseases, unless the corpuscular carcases be thrown out of the system by means of the excretory organs, and unless the vitality of the body be restored. When the lungs are not able to throw off the poisonous impurities that are thrown upon them, it leads to fever, inflammation of the lungs, consumption and other complications.

The causes of cold are very numerous. In fact, anything that lowers the vitality of a person, or anything which consumes the corpuscles of the blood too rapidly, gives rise to a cold. When a person sleeps he may unconsciously hold one arm out from under the cover; the cold and damp air strikes his arm for thirty or forty minutes; the blood which circulates in his veins and arteries is chilled; the corpuscles die in great number, until the blood and entire system is overloaded with corpuscles, impurities and mucus. In the morning when he awakes he feels dull; during the day his nose begins to run and his lungs feel heavy. A "cold" is coming, yet he does not know when or how he "caught" it. Do you think he "caught" anything? No; he simply lost vitality; the blood corpuscles died, when he had his naked arm exposed to the cold and damp air. Again, another person feels very angry with his surroundings, or with someone who has "treated him shamefully." He thunders and swears; he runs into fits of temper; he scolds; he poisons his digestive fluid, and thus the vital discs die on the altar of passion, and his system is overloaded with poison. Soon his "nose begins to run," and he feels a pain in his lungs; he feels tired and weary; he is compelled to remain in bed; he calls for a doctor; the sickness costs him six weeks of his time and £20 for medical aid and drugs, little suspecting that his passion, his anger and excitement caused it all, by using up the corpuscular cells of vitality.

Again, a person feels downhearted, sad and gloomy. He feels that evil hangs over him. He frets and quarrels with himself and with the world. He is sad because some friend died, or because he lost his wife, or because he lost his position or his money. This sadness weakens his physical functions and consumes his vitality, until he "catches cold."

Thus, we could enumerate a hundred causes, each one leading to the same result. To say, "I have caught a cold" is equal to saying, "I have lost vitality."

Colds are very dangerous; they are the forerunners of disease and death.

It may be true that we can do something for a cold from medical standpoints, but it is also true that a "cold will run its course." To cure a cold two things should be done: the corpuscular carcases, the poisons and the mucus should be removed from the system, and the vitality should be restored.

The vitality can best be restored by deep breathing and by the eating of highly nutritious or blood-building food, such as barley soup, whole wheat-mush, onions, yellow corn-mush, whole wheat-bread, green peas, fresh rich milk, honey, etc. A person should remember that when he eats solid food he must exercise much, or else he will not be able to digest his food or extract vitality from it.

The best thing to do when a person has caught cold is to take a sweat bath and then retire until he is well. If he would do this, or if he had time and opportunity to do so, he would soon recover.

The medulla, or part of the brain which superintends the function of the heart and the vasomotor nerves, has much to do with colds. A person strongly developed in this portion of the brain does not catch cold very often. Calmness of mind and ample vitality stored within the body prevent colds.

Nine men and women out of ten have one shoulder larger than the other, reading, writing, drawing and sewing tending towards this. Regular physical exercise is the cure for this.

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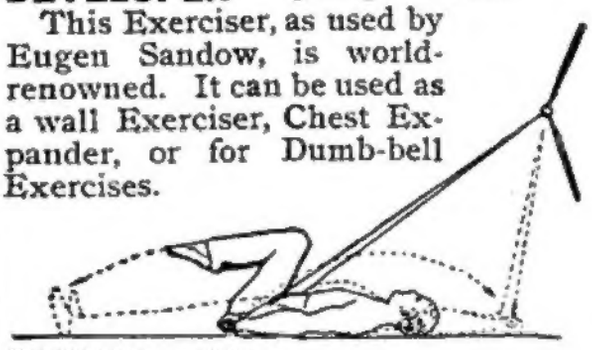

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